Center for International Health

Prevention of alcohol related harm in the workplace – an exploratory study investigating the obstacles and facilitators of best practice

Fredrik Velander

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

Signature: _____

Date: _____

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ABSTRACT

Working life is a vital component of everyday life of men and women around the world; it provides us with money to pay for items such as food, clothes, rent, mortgages, and school fees and so on. It is also an important part in our socialisation process with other human beings, our thoughts and ideas are shaped during interaction with other people. But the workplace has throughout history has also had some negative impacts through poor working conditions. Coexistent with working life, alcohol has influenced social life throughout history and the positive and negatives related to alcohol use have been well documented. In medieval times it was believed that alcohol increased productivity, something that modern research has contradicted. Alcohol was often used as a means to cope with harsh physical working conditions. In the modern world more and more emphasis has focused on the psychosocial work conditions and issues such as stress and work-overload have become common items in the media. Drinking alcohol has become a remedy to many of these issues, and it is used to assist in relaxation from a stressful day at work. Research has focused on how to rehabilitate people and to monitor the direct or indirect negative effects connected to working life. Prevention on the other hand has been more or less overlooked for a long time. It is not until the last 15-20 years that more emphasis has been put on investigating the prevention of alcohol related harm in the workplace. The present study investigated the prevention of alcohol related harm in the workplace using a three step model divided into the following stages: a) a comprehensive critical literature review; b) interviews with leading prevention experts from English speaking nations; and c) interviews with managers and employees in white-collar private enterprises and government agencies. The factors that consistently showed up in each phase of the study as important for successful prevention were a solid evidence base, knowledge of the impact of alcohol on production and safety, a clear link between costs and benefits, comprehensiveness, transparency, culturally appropriate, involved employees and regular evaluation. What is desperately needed is a more consistent

methodological approach in order to build a stronger evidence base in this field of research, to assist in the development of best practice in prevention of alcohol related harm in the workplace.

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CHAPTER ONE

1. Introduction

Alcohol has been a part of society since the dawn of time and there are plenty of references to the use of alcohol throughout history. For example, archeochemists have found evidence of fermented beverages in China dating back 9000 years. During the same period barley beer and grape wine were being produced in the Middle East (McGovern, Zhang et al. 2004). Other research has found evidence of the use of sugar in the manufacturing of alcohol in the Old World dating at least 1000 years back in time (Smalley, Blake et al. 2003). People have also through history acknowledged alcohol's negative as well as positive effects on people and mind. There are references on the power of alcohol from Mayan culture and in the Bible. In western society alcohol has become interwoven in culture and social life and in our everyday life we are surrounded by advertisements for various alcohol products. The fact that alcohol has become such an important part of western culture and the tension between maximising the benefits while reducing or minimising the harm makes preventing alcohol related harm more complex. Nevertheless, the high prevalence and high cost of alcohol related problems has driven significant preventive efforts to overcome the problem of alcohol related harm in many countries, e.g., Australia, Canada, New Zealand, Sweden, United Kingdom and USA. Some of this has focussed on the workplace because most people in western countries are active on the labour market and a majority are likely to be consumers of alcoholic beverages.

1.1 Background to the study

Throughout history, '*working life*' has been in constant change and this has never been more evident than during the 21st century, when information communication technology, or ICT, established itself as one of the most important tools in history. Organisations from the remotest corners of the world can now compete on a global market; this shift was so significant that some researchers have labelled it the new industrial revolution (von Otter 2003). This has also led to the development of what has become known as the new working life, where new types of organisations do not produce the tangible products that we were used to. There has been the development of a whole range and types of industries, for example service industries and information technology industries, to

mention a few. This paradigm shift in organisational structure and outputs has had a significant impact on the way work is organised and has presented managers and employees with a new and significantly more complex spheres in which business is conducted (Augustsson and Sandberg 2003). We have seen a diminution of the boundaries that have separated managers and employees, with employees expected to take more initiatives and be more self sufficient (Docherty and Huzzard 2003). In addition technological development has broken down barriers between work and leisure time since it is now possible to work from diverse locations.

The new working life requires significantly higher flexibility and quicker return on investments. For example, ten years ago many organisations used to plan their operations in six month cycles. In the new working life the same organisations may plan in two week cycles (Magnusson and Ottosson 2003). As a result, head office and shareholder pressure on managers has increased since they are expecting a quick return on their investments. In turn this has developed a situation in which there is little room for initiatives outside what is considered to be core business, for example, health promotion programs or alcohol polices since these may be perceived to reduce the profit margin or label the organisations as a problem organisation. The new organisational climate has led to more uncertain labour markets and the pressure on managers and employees is ever-increasing. Evidence of this can be seen in an increase of sick leave, stress leave and early retirement in many countries (Wolvén 2000; Augustsson and Sandberg 2003; Docherty and Huzzard 2003; Magnusson and Ottosson 2003; Melin 2003; Wikman and Marklund 2003).

In this new working life environment there is a need for flexible programs that target health related issues, programs that are adaptable to the current situation of the organisation and that do not require the setting up a separate infrastructure within the organisation to keep the program up and running. Previously developed programs targeting health related issues, for example; prevention of alcohol related harm or health promotion programs, were most commonly designed for large corporations that had the financial capacity and the available resources to implement the programs, and were often external expert driven or outsourced (Wilkinson 2001). But there is evidence of a paradigm shift in large corporations as well. Two examples was ABB and SKANSKA who transformed

the way they organised work by implementing programs, ABB T50 and SKANSKA 4T, that mimicked the characteristics of small organisations in the pursuit of a new flexible structure (Ekstedt and Wirdenius 1995). Organisations were clearly on the search for holistic, flexible, solutions to a number of problems, e.g., reducing hierarchies and creating shorter decision pathways, they are facing in order to stay competitive on the global market. Most small and medium size organisations do not have this capacity and therefore they need tailored and specific solutions that can be run by the organisation itself (Vinberg 1996). Another shortcoming of previously used models was that they often only targeted one subject, for example stress, while managers of small and medium enterprises were asking for more holistic approaches that targeted multiple areas, such as the psychosocial work environment, stress, alcohol and other drug use (von Otter 2003). In addition, the evidence base upon which various models are drawn was at best limited and to some extent still is, but this area is rapidly growing (Midford, Welander et al. 2005).

The fact that prevention of alcohol related harm in the workplace is a relatively new area of research raises a number of questions. Firstly, what is the evidence base for preventing and responding to alcohol problems in the workplace, in particular in small and medium size organisations? Secondly, would it be possible to outline a model of best practice for researchers that, through high quality research could establish a solid evidence base for workplace health professionals to tap into. Such a model would have the potential to become the foundation for a model of best practice that is not dependent on an expensive and complex infrastructure and that is flexible enough to sustain itself under the changing conditions of the new working life.

Since the new working life has seen an increasing growth of white-collar industries, and most prior research has focused on manufacturing industries, it was decided that it would be of greater interest to focus on this new type of industry. During the 21st century many organisations have gone through a streamlining process but during the same period of time we have also witnessed a significant increase in sick leave caused by deteriorating health status combined with an increase in subjective poor health of managers and employees, (Wikman and Marklund 2003). It is because of this deterioration of health that this study has focussed on workplace health promotion, with a particular emphasis on

prevention of alcohol related harm in the workplace. The project was jointly funded by two Swedish organisations – the National Institute of Working Life and Alna Riks (an organisation that works to reduce alcohol and other drug problems in the workplace), thus influencing the decision to focus on Swedish workplaces.

1.2 Research aims and objectives

Based on the background described above the main objectives of this study were:

- To identify evidence-based "best practice" in responding to alcohol related harm in the workplace;
- To assess barriers to and facilitators of best practice; and,
- To develop guidelines on best practice to assist, and assess, alcohol policy implementation in small- and medium size organisations.

A guiding principle in the structure of this thesis was evidence-based practice. In the context of this research, evidence based practice has been interpreted as involving a review of the evidence, practitioner expertise in understanding and interpreting the application of this evidence to unique individual and organisational needs and the views and wants and wishes of the target individuals and organisations. This is consistent with and supported by the description of evidence-based medicine offered by Sackett and colleagues:

> *"The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgement that individual clinicians acquire through clinical experience and clinical practice …(this includes) …effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights and preferences in making clinical decisions about their care. …*
>
> *Good doctors use both individual clinical expertise and the best available evidence, and neither alone is enough. Without clinical expertise, practice risks becoming*

tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient." (Sackett, Rosenberg et al. 1996) p71).

In order to achieve the objectives of this study the following research questions were developed:

- What does the evidence tell us about ensuring quality of life in the workplace, with particular reference to alcohol and other drug use and related problems and, where available, what are the theoretical underpinnings of this evidence?
- How do the relevant practitioners/experts interpret this evidence in terms of workplace responses?
- How does the evidence relate to current practice?
- What does the evidence and the practitioners/experts identify as the barriers to and facilitators of best practice? and
- What are the implications for enhancing responses in small- and medium size, white collar, workplaces?

1.3 Significance of the study

Numerous studies have over the years looked at the relationship between work and alcohol use but these have primarily focused on secondary prevention, in other words, dealing with treatment and rehabilitation of individuals back to work. As will be indicated later in the thesis, relatively few studies have dealt primarily with prevention of alcohol related harm in the workplace and even fewer studies have approach the issue from a more holistic, health promotion, perspective – in other words, considered in the context in which problems might develop and be maintained. In order to understand the origins of alcohol related problems in the workplace, they may be a result of work overload, uncertain working conditions or any other factors, it is essential to work from the context in which they exist. As will be demonstrated in this thesis, the new working life is a significant change of paradigm that has changed the foundation of how work is organised and as such put new and different demands on employers and employees alike. Therefore it is not appropriate to deal with alcohol as an individual entity; it has to be linked to its contextual setting and the complexity of variables that affect individual drinking habits and

related problems. The thesis attempts to highlight this complexity and to identify best practice approaches to deal with the numerous issues that affect the prevalence of alcohol related problems. By identifying best practice this thesis can assist in guiding future research in the area of prevention of alcohol related harm in the workplace by highlighting current methodological problems in this field. This can, furthermore, contribute to the development of a policy surrounding best practice research and the implementation of best practice models in workplaces.

1.4 Organisation of the thesis

This thesis is divided into three complementary phases, consisting of a systematic critical literature review, an insight in the international experts' opinions on prevention of alcohol related harm in the workplace and, finally, an assessment of the views and practices of staff and managers in white-collar industries in Sweden.

Chapter two presents the rationale, aims and significance of the study. Chapter three, consists of a systematic critical literature review assesses the level of best practice in current research and highlights some of the most fundamental methodological errors in current research, and the potential consequences of these errors on the establishment of a solid evidence base and the establishment of a best practice for prevention of alcohol related harm in the workplace.

In chapter four the perceptions of good practice when attempting to prevent alcohol related harms in the workplace among leading international experts are investigated, including the methodology and results of the survey conducted when acquiring this information. This chapter will also provide the reader with a first insight into the facilitators of and obstacles for the establishment of best practice in prevention of alcohol related harm in the workplace from an international perspective.

Chapter five encapsulates phase three of this study, including the methodology used and analysis of the result of a questionnaire survey on managers and employees in Swedish white-collar workplaces. It will also provide further insight into the facilitators of and

obstacles for best practice when attempting to implement preventative measures in the workplace to reduce the harm associated with excessive drinking.

The information collected during the three complementary stages of this thesis are brought together in chapter six where a triangulation of results is conducted to establish a roadmap of what constitutes best practice and suggestions of evidence based interventions.

The results of this study are discussed in depth in chapter seven as well as the extent to which confounding variables potentially could affect the study results. In addition, the strengths and limitations of the present study will be discussed and the chapter ends with a discussion of potential pathways for future research in the prevention of alcohol related harm in the workplace.

CHAPTER TWO
RATIONALE, AIMS AND STUDY DESIGN

2.1 Rationale

The amount of research on prevention of alcohol related harm in the workplace is limited and existing studies are often affected by design/methodological flaws. Flawed research designs result in studies with results and conclusions that cannot be accepted with confidence. Such studies have led to an abundance of intervention programs aimed at preventing the harmful effects of excessive alcohol use on, or in relation to the workplace based on poor evidence base. Interventions based on a poor evidence base are likely to result in less effective programs, both in terms of general effectiveness and cost-effectiveness. In the economic reality of the 21st century, where private enterprises, as well as government organisations, are dealing with fierce competition and/or financial restraints, cost-effectiveness is critical. Whether or not taxpayers' money finances programs aimed at preventing alcohol related harm in the workplace, there is no room for spending money on ill-designed programs based on a poor evidence base. Therefore, it is of outmost importance to determine what constitutes best practice when designing a prevention program, and what are the potential obstacles and facilitators that make the difference between a program's success and failure.

It is impossible to separate the workplace from the surrounding community, and as such the culture and common perceptions related to alcohol use are likely to reflect back on the workplace culture and drinking behaviour. A lot of the previous research has more or less neglected to take the cultural context into account, leading to studies that leave a vital component out of the picture that could affect findings. One example could be that of a study being conducted in an area where the majority of the population belongs to a religious affiliation that prohibits alcohol use, and this would likely affect results. Another example could be a community with a strong drinking culture, once again influencing the results. By using Swedish white collar workplaces which are relatively culturally homogeneous (Lindgren 2002) the researcher aimed to correct for the confounding effects that culture may have on the study.

As a scaffolding of best practice the researcher used Duffy and Ask's model of ingredients of best practice for developing and implementing a model for prevention of alcohol related harm in the workplace (Duffy and Ask 2001). Best practice is an ideal situation when all the components are in place to maximise the probability of having a program that will produce the highest level of impact, or success. Working with best practice is working with components that will streamline the entire process from program development, implementation and, based on high quality empirical evidence, will produce cost effective results, in this particular case, when preventing harms related to excessive alcohol use. In the following each component of best practice will be defined and rationale will be given to why each component is vital for best practice and what it can achieve.

2.2 Aims

There were several aims for this study. Firstly, the study aimed to identify the constituents of best practice when attempting to prevent alcohol related harm in the workplace, from a holistic perspective. The second aim was to assess the barriers to and facilitators of best practice. This was in order to increase the probability of successful implementation. Thirdly, by ascertaining current shortcomings within the field of prevention research assist in the establishment of a good practice guide for researchers investigating prevention of alcohol related harm in the workplace. Fourthly, since there is a dearth of research available to guide organisations towards high quality interventions based on best possible evidence.

2.3 Study design

Due to the scarcity of available research, the study was exploratory in character. A three-step research design, with each phase relating to the results of the previous phase, was developed to investigate various sources of information. This methodology, commonly referred to as triangulation, was deemed particularly useful when dealing with different data sources. The present research program involved collecting data from three different sources.

The first step was to conduct a comprehensive critical literature review, and details regarding this review can be found in the coming chapter. The reason for conducting the

critical literature review was two-fold; firstly, an assessment of the literature was made to determine the quality of conducted research related to prevention of alcohol related harm in the workplace. Secondly, the critical literature review helped to identify leading researchers in the area and who could potentially participate in step two of this study.

The second step of the research design was to conduct interviews with leading experts on prevention of alcohol related harm in or in association with the workplace. It may seem rather repetitive to interview leading experts since they all have been published in peer review journals and as such their perception of the problems associated with excessive alcohol use would have been argued in those articles. What one has to remember though is that some of those articles may have been published 15-20 years ago and may not reflect current views on the issue. Furthermore, articles may have been published in special issues and in conjunction with several co-authors and therefore be aimed towards a particular area and only give a fragmentary picture of opinions. It was therefore determined that interviewing leading experts could provide a valuable contribution to the current study.

The third step of the design was to interview the target groups for prevention of alcohol related harm in the workplace: that is, managers and employees. Of the research conducted on prevention of alcohol related harm in the workplace, the vast majority has focused on blue-collar industries and white-collar industries have more or less been ignored. There may be several reasons for this; firstly, it may because there is a perception that the negative effects are likely to be both more imminent and more dramatic in a blue-collar industry with accidents and potentially casualties directly linked to intoxication of alcohol. Secondly, from a safety perspective, people operating heavy machinery are easily identifiable targets for prevention interventions. Thirdly, in the past, blue-collar industries have generally employed a larger proportion of the labour force, and thus an intervention in a blue-collar setting would have had a greater impact than if it had been implemented in a white-collar setting. On the other hand, there are several reasons to put the focus on white-collar industries and these are discussed below.

During the past ten to twenty years a significant transformation of the working life has taken place in many western countries, with a rapid growth of white-collar industries while

blue-collar industries have been on the decline. As a result, more and more people are employed in white-collar occupations such as, for example, service industries and media (Magnusson and Ottosson 2003). There has also been a substantial expansion in occupations where it is possible to be away from the main office, primarily due to the technical advancements in terms of information and communication technology (ICT), either working from home or at the other side of the planet though the use of internet and other communication resources (Augustsson and Sandberg 2003). It is therefore much more difficult to detect alcohol related problems in a setting with mobile employees and less structured workplaces. Thus, it was decided to focus on white-collar workplaces.

Because of the unexplored nature of prevention of alcohol related harm in the workplace, the final analysis of the collected data used triangulation to bring together the evidence from peer reviewed articles and reviews, the opinions of leading experts from around the world including USA, Canada, UK, Germany, Italy, Sweden, Norway, Finland, Australia and New Zealand; and surveyed managers and employees in white collar workplaces in Sweden.

2.4 Overview of triangulation

Webb and colleagues (Webb 1966) stated that *Triangulation is interpretation with imperfect methods*, a statement that will be explored in more detailed in the following sections. Three of the major benefits of triangulation are as follows:

- Firstly, the usefulness of triangulation lies in the use of a combination of methods, with the purpose of obtaining as much information as possible on one particular issue (Knafl and Breitmayer 1989; Alston and Bowles 1998).
- Secondly, the use of multiple methods increases the validity of study results and incorporates results from various sources. This is also useful when gathering data from different levels of a community, for example, politicians, civil servant and local residents.
- Thirdly, using triangulation when investigating a phenomenon can assist in measuring the credibility of what people are saying by using various sources of information. The use of various informants can then help the researcher to

compare and contrast what various sources are saying in order to determine the level of congruency of collected statements (Bell 1993).

One of the drawbacks of triangulation is that the method is time consuming and costly (Alston and Bowles 1998). The basic idea behind triangulation is relatively straightforward and very much based on common sense, that is, to look at things from different perspectives. Most scientific methods have some flaws, or shortcomings, and triangulation is a way to work around these flaws by utilising different methods that complement each other. It is important, though, to avoid using methods that share the same shortcomings because the researcher may consolidate methodological problems. Using different sources of information, triangulation can assist the researcher in identifying data that point in the same direction and as such it is not necessary for results to be exactly the same and neither result need not to be "the right one" (Kjær Jensen 1995).

Even though the results may not be the same or be "the right one", the use of triangulation will assist the researcher in bringing the results of the different methods together and, hopefully, give the researcher a trail that identifies a particular phenomenon. Individually neither method might point the researcher in the right direction but by combining methods, the sum of the various methods will show the results, which then will be adequately accurate.

2.5 Types of triangulation

According to Denzin (Denzin 1970) there are four different types of triangulation: Method-, Research-, Theoretical-, and Data triangulation. A brief description of each type follows.

2.5.1 Method triangulation

Method triangulation uses different methods for gathering data, for example, interview, questionnaires and observations, and the methods can be completely different from each other or variations of the same type of method (Kjær Jensen 1995). An example is using a combination of postal questionnaires and electronic web-based questionnaires.

2.5.2 Research triangulation

When more than one researcher, which is common in larger research projects, collects the data, it is defined as research triangulation. One example when it is beneficial to have more than one researcher gathering data for the same project is when gathering data through interviews (Kjær Jensen 1995). Interviews can be arduous on the best researcher and therefore it can be beneficial to have more than one in order to alternate when asking the interviewee questions. It can also be beneficial to have more than one researcher when the interviews are being transcribed and analysed, for example when using recordings it sometimes is difficult to hear what an interviewee says and having more then one researcher can help in making the correct interpretation.

2.5.3 Theoretical triangulation

The least common of the different types of triangulation is the Theoretical triangulation. The main reason for its uniqueness relates to the relatively faint theoretical foundation within the area of qualitative research. Theoretical triangulation has its theoretical roots in sociology and the most prominent names that have provided some of its theories and concepts are Pierre Bourdieu, the French sociologist, and Margarete Archer and Paul Willis, who are both based in the U.K (Zeuner 1988). The strongest argument for using the theoretical triangulation is that this method allows the researcher to look for support from more than one theoretical perspective. This is something that in turn will increase the security on how to approach the analysis phase of collected data and as such benefit the process of developing new, independent, theories. There are some problems associated with this type of triangulation. One potential problem is that the data material can be too extensive for the theoretical triangulation to cover all aspects of it. There is the possibility that there are other theories than the one initially chosen for the triangulation, that to a better extent can be related to the results (Kjær Jensen 1995).

An example of theoretical triangulation is multi-level analysis (Kjær Jensen 1995). When studying a social phenomenon in context it is necessary to use multi-level analysis to move across several levels of investigation, the most common levels are the: individual, community and structural levels (Snijders and Bosker 1999; Stimson, Donoghoe et al. 2001).

2.5.4 Data triangulation

The fourth type of triangulation, and the one used in this study, is data triangulation. This is the most common, and well known, type of triangulation and it utilises data from various sources, for example a combination of quantitative and qualitative data, to investigate a phenomenon (Olsen 2004). One of the main reasons for using data triangulation is to avoid being dependent upon one particular groups' perception of a phenomenon. For example, when dealing with a sensitive topic like alcohol use it is quite possible that various groups would answer differently depending on their point of interest (Kjær Jensen 1995). The aim of triangulation in this study was to find common themes from the three different sources of information, starting with the critical literature review. In more specific terms, this triangulation aimed to determine what is to be considered good practice and what are the obstacles and facilitators that can hinder or assist the implementation of a prevention program.

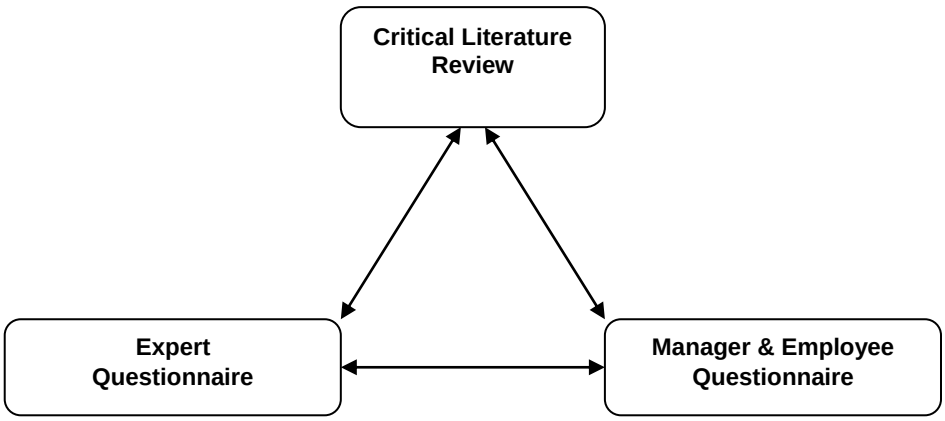

Figure 2.1: Graphic illustration of the triangulation pathways used during this study

The findings for each phase were collated in a table for comparison purposes. When one factor was identified in the critical literature review it was compared to the results of the expert questionnaires and the questionnaires aimed at managers and employees. If the same factor appeared in all three groups it was considered to be strong evidence and an important component of good practice. This procedure was then conducted on each item in the various phases.

The goal when choosing the research design for this thesis was to find a balance between quantitative and qualitative data and there were several reasons for this. The most important reason was that this combination provided the researcher with in depth data that enabled probing the core issues of this study, whilst the broader data contextualised the in depth data. This combination was vital in order to understand the components of good practice and to identify potential obstacles and facilitators of good practice regarding prevention of alcohol related harm in the workplace.

2.6 Summary

The aim of this study was threefold: 1) to identify good practice; 2) assess barriers to and facilitators of good practice, and 3) develop a practical tool for organisations. Due to the overall lack of research in the area an exploratory research design was utilised using a triangular model where data was gathered from three different sources: a) a comprehensive critical literature review, b) interviews with leading key prevention experts, and c) interviews with managers and employees. The reason for using three different sources of information was to avoid being dependent upon one source, and this was considered of vital importance because of the lack of prior research in the area. As such, it became obvious that data triangulation was the best suitable methodology to use in the present study.

CHAPTER THREE
PHASE 1: COMPREHENSIVE CRITICAL LITERATURE REVIEW – METHODOLOGY AND RESULTS

3. Introduction

In all research the aim is, or at least should be, to produce high quality research using rigorous methods appropriate to the research question(s) while at the same time employing high ethical standards. When conducting the current literature review the aim was not just to describe the various research reports but also to identify methodological limitations and implications for translation into practice. This is of particular importance since this field is still in its infancy.

3.1 The literature review

The starting point was a comprehensive critical literature review that comprised 107 peer reviewed scientific articles and 13 reviews. To ensure currency, only articles published between 1985 and April 2004 were included in the literature review.

3.1.1 Framework and methodology for critical literature review

Due to the complexity of the subject, this literature review consisted of peer reviewed articles from a number of areas, including prevalence, characteristics of populations and psychosocial work environments. The reason for including these was to obtain a more accurate picture of the complex nature of prevention of alcohol related harm and to facilitate an understanding of the context in which alcohol and work interact. The current search, collection and analysis of the literature was conducted systematically and divided into four separate sections. Section one involved a search and collection of literature published in English, Swedish and Norwegian, languages available to the researcher. This stage looked at estimations of prevalence of alcohol consumption by the workforce and how many of these were expected to display some form of alcohol related problems. It also investigated the underlying complexity of estimating prevalence of alcohol use among a working population.

The second section investigated various functions of alcohol use, both from an individual perspective and an organisational perspective, and included the categorisation of each piece of scientific literature on the basis of its focus. The third section was an analysis of the literature using preconceived criteria and attempted to define the costs associated with excessive alcohol use for the individual, the workplace and for the broader community. This section also included a review of various workplace factors that may influence use and harmful outcomes, for example work-place stress and the development of drinking norms. In section four, obstacles and facilitators that affect the success of prevention programs were reviewed. In addition, a proactive approach to prevention and a variety of paths to prevent alcohol related harm in the workplace were also reviewed. This last section also consisted of writing the review including an analysis of the current state of this field of research.

3.1.1.1 Section 1: Search for relevant literature

Stage one involved the search for and collection of literature, predominantly of peer reviewed journal articles. The search for relevant published and unpublished material involved scanning six different databases. These six databases were *ProQuest 5000*, a multiple database search tool; *EBSCOHost EJS, InfoTrac OneFile, Science Direct, Swetswise* as well as *Wiley InterScience,* search engines that are multidisciplinary in character. To complement these search engines, other informal search methods were also utilised. For example, numerous peer reviewed articles were located through the examination of reference lists on collected articles and reviews. A standard keyword search trail was developed in order to ensure consistency of search strategies. The following key words were used, in various combinations: alcohol, work, workplace, prevention, occupational health and safety, aetiology, proactive, alcohol problems, benefits, harm, accidents, costs, psychosocial work environment, adverse effects, absenteeism, social costs, productivity, and health.

3.1.1.2 Section 2: Categorisation and database entry

The second stage involved the categorisation and database entry of collected peer reviewed journal reports and reviews. Articles were categorised as one of the following: prevalence paper, paper investigating the relationship between gender and alcohol use,

workplace factors influencing the use of alcohol, organisational impact, costs and obstacles or facilitators for successful implementation. The peer reviewed articles were separated into the different categories depending on the main aim of that report.
Due to the fact that all articles to some extent examined the prevalence of alcohol use in the workplace, no such category was selected. Instead the articles were categorised into groups focusing on the economic impact of excessive alcohol use and the psychosocial factors that can result in excessive drinking, for example, work-related stress.

3.1.1.3 Criteria for inclusion in the critical literature review

In an attempt to keep focus, articles were sought from two different categories: primary prevention and the effects of alcohol use. There are several reasons for selecting this particular focus. Firstly, alcohol related harm in the workplace is a very complex area comprising multiple factors. Some of these factors are found within the boundaries of the organisation while others are of external character. Some examples of internal factors include psychosocial work environment factors such as work load, decision latitude, alienation or perceived work-related stress. Examples of external factors are the marital status of an employee and availability of alcohol in the broad community. Secondly, since this study has a focus on primary prevention as the key issue, Employee Assistance Programs (EAP's) are excluded due to the fact that they generally have a secondary preventive and/or treatment focus. Thirdly, in order to focus on the most recent data, this review was limited to peer-reviewed articles published between 1985 and April 2004. The reason for searching for recent data was the greater current relevance for this issue and for the target group on which the research was conducted. Furthermore, the review does not claim to include every peer reviewed article published between 1985 and April 2004. The extent of the Internet and the number of available databases it is possible that some articles may have been overlooked. In order to minimise this risk, multidisciplinary databases were used, as well as search engines that covered multiple databases. Using this method, a system of cross-referencing was developed and it was possible to get confirmation that articles included in this critical literature review were of main reference character. All articles were then catalogued into EndNote, version 7.0, and listed with author, publication date and the name of the publishing journal, to avoid duplication of articles.

3.1.1.4 Section 3: Critical analysis

3.1.1.4.1 Criteria for scientific investigation

Since the main aim of this critical literature review was to identify what constitutes high quality research, all scientific reports were critically assessed using the following criteria, employed by (Allsop, Bush et al. 1997b).

1. Sound external validity
    a. Sample selection to be random or representative and any effects of differential attrition assessed and/or controlled for
    b. Adequate sample size
    c. Testing effects controlled for
    d. Possible reactivity effects taken into account and/or minimised
    e. Possible effects of multiple treatments taken into account and minimised
    f. Any effects of historical circumstances taken into account

2. Sound internal validity
    a. Assessment of the validity and reliability of the measuring instruments used
    b. Appropriate use of the measuring instrument
    c. Random allocation of subjects to groups
    d. Assessment and/or minimisation of the possible problems caused by differential attrition from groups
    e. Assessment and/or minimisation of the possible problems caused by the effect of taking one test on the scores of another test (testing effects)
    f. Ensure that conclusions reached about causal relationships warranted by the study design and data, and that alternative explanations for such relationships were adequately ruled out
    g. Assessment and/or minimisation of the potential effects of maturation, history, and selection, and the interactions of any of these.

3. Sound statistical conclusions
    a. Assessment and/or minimisation of the effects of statistical regress (regression to mean)
    b. Appropriate application of statistical tests

c. Adjustment for inflated error rate when conducting multiple comparisons
d. Where sample has been sub-divided for analysis, confidence intervals should be included to give an indication of the precision in relation to the sub-sample analysis.

Once a piece of literature was critically assessed using these criteria, the article was allocated to one of five categories:

1. Very high quality studies were those which provided enough detail that any methodological error could be detected; and either none were found, or any that were found would have been difficult to avoid or were minor and unlikely to affect the validity of the conclusions made in the study.
2. High quality studies were those where there were methodological errors that could have been avoided but which were unlikely to have affected the validity of the conclusions.
3. Reasonable quality studies were those that had errors that may have affected the validity of the conclusions.
4. Poor quality studies were those which had numerous methodological errors that probably had an influence on the validity of the conclusions, and where the influence of these errors was unacknowledged by the author/s.
5. Very poor quality studies were those that had a major flaw in their methodology, or where there was no information on the method used, thus making a determination of quality impossible.

3.2 Prevention of alcohol related harm in the workplace

During the collection of the research literature, it became evident that the majority of the literature could be grouped in three broad categories which dealt with variables vital for the prevention of alcohol related harm in the workplace. The categories incorporated various aspects that previous research has deemed vital when studying the association between alcohol and work, as well as factors that may affect the outcome of excessive alcohol use or that might affect individual drinking patterns or drinking levels. Studying these factors also assisted in the identification of obstacles and facilitators for prevention of alcohol related harm in the workplace. The identification process was based on

experiences from projects described in the peer reviewed articles collected for this critical literature review. The categories were as follows:

3.2.1 Alcohol and work

a. Prevalence - that is how common is it for men and women to consume alcohol at, or in relation to the workplace, and are there factors that affect prevalence.
b. Nature of population – namely do factors such as age, sex, religious affiliation, or different categories of industries affect the prevalence of alcohol in the workplace?
c. Functions of alcohol use - this section investigated the role of drinking at, or in relation to work.
d. Alcohol related harm - that is, what are the potential harmful consequences of excessive alcohol use for the organisation and the individual.
e. Costs - direct or indirect, related to excessive use of alcohol at, or in relation to work.

3.2.2 Workplace factors influencing alcohol use and harm

Within this category were factors that had the potential to influence the use of alcohol and increase the likelihood of experiencing negative outcomes of alcohol use. This category was divided further into the following sub-categories:

a. **Workplace stress**

   As for example work overload

b. **Perceived permissiveness regarding alcohol consumption**

   The individual perception that certain behaviour is acceptable, for example that it is acceptable to consume alcohol in or in association with work.

c. **Level of supervision**

   The level of physical and/or visible control an organisation has over their employees including those in management position.

d. Perceived alienation

When an employee feels that they are not part of the overall organisation or when they have problems seeing their contribution in the production process.

e. Monotonous work

A repetitive work situation with little or no mental challenges for the employee.

f. Perceived lack of decision authority

When an individual feels that they have little or no chance to influence their work situation.

g. Feeling of lack of future career development

The perception that an employee is stuck in their current position and there is little chance for advancement.

3.2.3 Primary prevention

In this third and last section of the critical literature review, primary prevention was reviewed, analysed and discussed. What underlying factors were there that might work as facilitators or obstacles for change when attempting to prevent alcohol related harm in the workplace? Treatment and EAP's (Employee Assistance Programs) as a component of the overall picture were discussed, but only briefly since, as already noted, the aim of this thesis was to focus on primary prevention of alcohol related harm and not on treatment.

3.3 Results

Prevention of alcohol related harm in the workplace is in many ways an unexplored area of research – the literature review indicated that during the past decade it has received little or no attention. This is not necessarily due to a lack of interest in the relationship between alcohol and work; it may be more to do with where the focus has been and the challenges of conducting research in this area. Over the years there has been a greater focus on research into the treatment and rehabilitation of individuals with alcohol related problems in the workplace. As a result, a substantial amount of research has focused on Employment Assistance Programs (EAP's), different treatment options and their outcome.

Very little attention has been given to approaches where prevention is the primary feature. There might be several reasons why this has been the case. One reason can be found in the fact that many organisations have possibly demanded a quick fix to any alcohol related problems that occurred. Therefore the focus has principally been on how to handle a problem when and if it occurs. This process has often included detection, discipline and employees referred to treatment, in other words, a focus on the individual. Another reason can be found in the increasingly shorter decision making processes that became more prominent in many organisations in the 1980's and 1990's. This also resulted in a reluctance to adopt strategies that demanded a longer horizon than 3-6 months and made it very difficult for many managers to be motivated for long term, or what was considered to be 'on the side' programs, such as health promotion programs or programs aimed at preventing alcohol related problems in an organisation.

A systematic summary of all articles that have been examined is provided in Appendix 1. The summary includes author and year of publication, study design; key findings of the study, major shortcomings and a rating of the study, based on the criteria for the literature analysis.

3.3.1 Relevant literature

Within the constraints described in section 3.1, the literature search identified 107 articles.

Once the literature was collected, it was divided into the three broad categories described in the methodology section, namely:

1. Alcohol and work
2. Workplace factors influencing use and harm
3. Primary prevention

Table 3.1 below describes the number of articles found in each of the main categories and the quality rating of articles. Some 37% (N=40) of all articles included in this review are of reasonable quality, meaning that the paper includes information about sample size, response rate and the use of a reasonable/robust method. At the same time, the papers are affected by several limitations that have a negative impact on the representativeness

of study results, for example, relatively small sample sizes, low response rates, data collected from a small number of organisations, relatively poor analysis regarding confounding variables that could have an impact upon study results). Only a small number of articles (6%, N=6) were defined as being of very high quality. For example, the author(s) have described the data collection in a manner that allows replication, used a large sample and have a relatively high response rate (i.e., factors that facilitate interpretation and increase the representativeness and generalisability of the study) as well as the inclusion of a discussion about potential confounding that could have affected study results and how these were controlled – all details necessary to assess reliability and validity and allow replication.

Table 3.1 Quality rating of articles included in literature review

	N	**%**
Very High Quality Papers	6	6
High Quality Papers	30	28
Reasonable Quality Papers	48	45
Poor Quality Papers	23	21
Vert Poor Quality Papers	0	0
TOTAL	107	100%

This can be compared to studies that were defined as poor quality, a category that is almost four times as large as the very high quality category. The general problem in this category is the lack of information regarding sample sizes and response rates, a factor that generally affects the generalisability of a study.

One of the most common problems found in numerous studies could be defined as "boosting" response rates. It often occurs that authors report a given response rate and after that they begin removing, for various reasons, cases and end up with a much smaller sample than in the initial calculation of response rates. What this means is that they are not reporting the "actual" sample size and response rate.

3.4 Categories of research problems

The following section contains a description of the methodological shortcomings found in the investigated peer reviewed papers published between 1985 and 2004 and the results are summarised in table 3.2 at the end of the chapter.

3.4.1 Ill defined methodology

A fundamental basis of quality research is replicability. In other words, it should be possible for others to conduct a study that is comparable to the initial study. Therefore it is critical that the report includes detailed information about the methodology used, background information to the study, what type of sample has been used (for example, a stratified sample), the sample size, the characteristics of the sample (for example, the cultural context of the region where the sample was collected). Other necessary information relates to the purpose of the study, the questions being asked and how the results were analysed. In addition it is helpful if the researcher provides a rationale for the choice of methodology, sampling and analysis of the results, in order for other researchers to understand the context of the research conducted (Kumar 1996).

The majority of studies conducted between 1985 and April 2004 were in one way or another affected by ill defined methodologies, one of the major reasons why very few studies were categorised as high- or very high quality. The lack of information regarding the research methodology used makes it virtually impossible to determine the validity and reliability of the study conducted and it makes any attempt to replicate the study a task based on guesswork.

In addition, this lack of information provides very little value to this new area of research, resulting in an ongoing weak evidence base. In other words, poorly defined methodology makes it inherently difficult to replicate a study due to lack of information provided on how the study was designed, and it also make it very complicated to determine the validity of the results of the study.

Peer reviewed jounal articles by Addley, K., McQuillan, P. & Ruddle, M., (Addley, McQuillan et al. 2001); Barrett, G.F., (Barrett 2002); Kivimäki, M., Kuisma, P., Virtanen, M., et al.,

(Kivimaki, Kuisma et al. 2001); Murphy, S.A., Beaton, R.D., Pike, K.C., et al., (Murphy, Beaton et al. 1999) are examples of papers that provide the reader with an insufficient level of information regarding methodology that it is, at best, very difficult to replicate these studies.

Another source of replication problems is when a study has been conducted in a unique setting. For example, a study may be carried out in a particular contextual setting that has since ceased to exist. Another reason relates to an inherent problem in research on communities and workplaces, the fact that people come and go and over a period of time a population my change completely. What this means is that when a researcher attempts to replicate a study he or she will not carry it out on the same study population as the previous study. This is also one of the reasons why most researchers who do population studies accept the fact that populations change and therefore attempt to get as close to the characteristics of sample of the previous study as possible, but this is only achievable if there is sufficient information to choose a representative population.

3.4.2 Cross-sectional studies

The vast majority of studies in this literature review utilised a cross-sectional study design, something that has been acknowledged as a weakness by several authors since the methodology involves, simply expressed, a here-and-now snapshot of a particular phenomenon. This method provides a snapshot of the study sample at a given time, not over time, limiting the ability to detect change over time, or to fully understand the relationship or causality between independent and dependent variables in the study population (Kumar 1996; Holme and Solvang 1997).

Even though this has been acknowledged as a significant flaw and the information gathered using this particular methodology is not particularly useful when studying social processes which investigate if a change in A affects the outcomes of B, there are a number of reasons why this methodology continues to be used (Holme and Solvang 1997). Firstly, the study design is very simple. The researcher defines a question that he or she wants to find an answer to, thereafter a study population needs to be identified and the sample size has to be determined. Then the researcher only has to gather the information.

Secondly, since there are no particular needs for any special equipment these types of studies are relatively cost effective to conduct. Thirdly, due to the simple study design analysis of the results is reasonably simple (Kumar 1996).

In other words, due to restraints in time and money a cross-sectional study design has its purposes but it is vital to recognise the limitations and not to use the design if it is unsuitable to answer the question that the researcher asks. If we want to study change a pre- and post study design is of much better use and is more likely to provide the researcher with adequate answers (Kumar 1996). It is also important to acknowledge that the choice of research design is to some extent determined by the funding bodies. The current funding climate does not favour longitudinal studies, or other study designs, that are more likely to find answers to determine change caused by various types of interventions over a period of time. So to some extent the researchers are limited to what is plausible to achieve within a set financial frame.

Unfortunately in studies conducted by, for example, Allamani, A., Cipriani, F., Innocenti, S., et al. (Allamani, Cipriani et al. 1988); Ames, G., et al., (Ames and Janes 1987), (Ames and Janes 1992), (Ames and Grube 1999), (Ames, Grube et al. 2000); Cunradi, C.B., Greiner, B.A., Ragland, D.R., et al. (Cunradi, Greiner et al. 2003), there were little or no reflection over the use of cross-sectional study designs, except by highlighting that his is a problem. It is reminiscent of an unapologetic apathy were researchers accept working with incomplete models rather than finding ways overcome this methodological shortcoming by: 1) choosing a different methodology or, 2) combining methods to strengthen a weak methodology. Either way is clearly better than staying with a particular methodology, in this case a cross-sectional study design, just because it is convenient.

3.4.3 Self-reported drinking data

A frequently occurring methodological problem is the use of self-reported drinking data. At a first glance it seems fairly straight forward, if a researcher wants to know the consumption of alcohol in a particular population they simply ask how much they drink. The problem with self-reported drinking data is that it has been demonstrated to be an

unreliable indicator of individual drinking patterns and drinking levels. For various reasons, of which a few will be mentioned here, people may underreport how much they drink. If a study is conducted on staff in a safety sensitive occupation such as airline pilots or military they are more likely to under-report their drinking due to the sensitive nature of their work and the negative consequences it can have if they are perceived as problem drinkers. For example, Cunradi, Greiner, Ragland et al. (Cunradi, Greiner et al. 2003) conducted a study on transit operators using self-reported drinking data. The use of this type of date in this particular setting has a number of potential complications that may have an impact on the study results. Reporting high levels of alcohol use could put an operator under investigation and result in suspension from driving therefore it is likely that the participating operators would underreport their drinking levels. Therefore, attempting to link emotional exhaustion to levels of alcohol use are deemed to be flawed since it is very unlikely to get a true picture of the situation.

One study that has dealt with the problem of underreporting (Hoyer, Nilssen et al. 1995), conducted in a controlled environment, investigated the discrepancy between actual drinking and self-reported drinking data. Their study was conducted in Longyearbyen on the small arctic archipelago of Spitsbergen, or Svalbard. Svalbard, with Longyearbyen as the only major community, is a duty free zone with no tax on alcohol and there is only one airport and one harbour where cargo can land which means that all alcohol intake is easy to monitor. What they found when comparing sales data with self reported drinking data was a discrepancy of over 40 percent, that is, the amount of sold alcohol was 40 percent higher than the drinking levels reported by the participants. From this Hoyer and colleagues concluded that self-reported drinking data would at least produce an underreporting of alcohol use of approximately 40 percent, and, that self-reported drinking data is an unreliable source when attempting to determine levels of alcohol use in a population.

3.4.4 Reliability and validity problems

An author of a methodology book on interview technique once said: *"how you ask a question will determine what types of answers you will get" (Andersson 1995),* a universal truth that never seems to change no matter what scientific school a researcher belongs to or what type of knowledge they are trying to acquire. It very clearly highlights the importance for researchers to think about, not only the questions they ask but what answers they want to get.

It is of utmost importance throughout the theoretical process when developing the problem and when conducting the data collection that researchers question whether there may be any classification or random errors in the study design. A researcher continuously needs to critically assess data both during the development of, for example, a questionnaire, and the analysis of information as this is the key component when attempting to achieve the highest level of validity and reliability (Holme and Solvang 1997).

But before we go deeper into the problems that a lack of reliability and validity can cause it may be helpful to have a definition. Reliability of a research instrument is determined by its stability, in other words, is the research instrument consistent and stable and produces similar results every time it is used under constant conditions. With a higher level of consistency in an instrument the more likely we are to get a reliable result, measured by random variation in results (Moser and Kalton 1989; Kumar 1996; Holme and Solvang 1997; Dahmström 2000).

But it is not enough to depend upon reliability alone, as a researcher we also depends upon validity. Validity is when we measure what we think we measure, or as defined by Babbie (Babbie 1990) *"…validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration" (Babbie 1990 p.133).* If this is not the case the researcher is faced with a systematic error that will remain even if he or she is conducting multiple measurements.
But how do we know whether an instrument measures what it is intended to measure? One way of controlling for this is to make sure the theoretical variables in the study have

been operationalised in a way that the operational variable and the theoretical variable fall as close to each other as possible, see Figure 6.1 below. This would then be an indicator of the variable's validity.

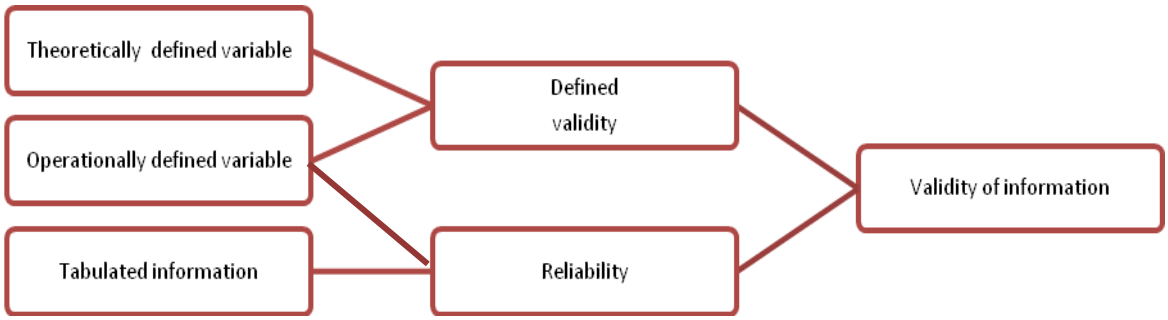

Figure 3.1: Correlation between the validity and reliability of information (Holme and Solvang 1997)p.167

A high level of reliability is a necessary condition in order to achieve a high level of validity, but depending only on reliability by itself is not enough. In most social sciences it is common to determine validity either by looking at logical or statistical evidence. If we attempt to establish logical evidence we are faced with the task of providing a strong enough rationale.

Data collection instruments or methods that have not been pre-tested and validated may produce results with great reliability problems; therefore it is very difficult to determine the outcome of those studies.

An example of a study afflicted by problems caused by using a data collection instrument that appears not to have been adequately tested was Bennett & Lehman (Bennett and Lehman 1998) since the authors themselves address the fact that their stress measure comprised of a few items that did not distinguish between different dimensions of job stress. Considering that this was one of the main questions is their study it is adequate that they have not taken this into consideration before they conducted the study. Another example was a study conducted by Stallones and Xiang (Stallones and Xiang 2003) who investigated the connection between occupational injuries and drinking patterns used a survey instrument that was not externally validated. What they found was that farmers that had higher volumes of alcohol use were more likely to sustain an injury. There are a

number of complications in this particular study related to using an instrument that was not externally validated. Firstly, as mentioned earlier, self-reported drinking data is highly unreliable since it usually results in underreporting. Secondly, by not having a validated instrument one can question the reliability of the answers provided by the participants. It is impossible to know whether the respondents answered the questions asked in the way the researchers intended, something that will affect the results. These two problems in combination, self-reported drinking data and injury data collected with an instrument not externally validated are opens up the potential for highly skewed results in terms of underreporting of both alcohol use and the prevalence of alcohol involvement in occupational injuries among this farming population.

3.4.5 Problems with sample size

Firstly, when conducting sampling for a study the researcher is faced with both advantages and disadvantages. By selecting a representative sample from a larger population the researcher saves both time and money, compared to conducting research on the entire population. The disadvantage is that by only looking at a sample out of a population the researcher can only predict, or estimate, particular characteristics of the population, i.e., it is inherently an inexact science. It is therefore better to have as large a sample as possible since this will increase the representativeness of the research.

Secondly, the other important factor that needs to be taken into account is the extent of variation in the sampled population. This is determined by how homogenous a sample population is; the more homogenous a population is the smaller sample size can be used without losing accurate results.

So how does a researcher determine whether or not a sample size is adequate? The answer to that depends on the research question, what the researcher wants to do with his or her findings and what kind of correlations will be investigated. There are various equations and formulas to aid in the calculation of sample sizes but in general there are three things that need to be taken into consideration when determining a sample size:

1. The estimated prevalence of the variable of interest?

2. What is the acceptable margin of error?
3. What is the desired level of confidence?

As mentioned previously, the larger the sample – the greater the accuracy. But restraints such as time and funding often put limitations on the sample size the researcher can get. Therefore the determining factors when choosing a sample is what hypothesis are we trying to answer and the strength of the correlations possible to establish under current restraints (Kumar 1996). The best way of doing this is through a test of statistical power, something that can be done during the design of a study or after the data has been collected. In our case it is of particular interest to study *a priori* power analysis since this determine the appropriate sample size in order to achieve adequate power in the statistical analysis we would like to conduct. If, for example, a researcher wants to compare drinking patterns between men and women then the power of the test is the level of probability that the researcher will find a significant difference in drinking pattern between these two groups. But before one starts to test the power one has to decide how unlikely a result must be in order to be considered significant, the most commonly used probability criteria's are 0.05 (1 in 20), 0.01 (1 in 100) or 0.001 (1 in 1 000). If the researcher decides that the criterion is 0.01 then the probability of a significant result must be less than 0.01 (Kumar 1996; Dahmström 2000; Körner and Wahlgren 2000).

If the researcher wants to increase the power of a statistical test he or she can increase the significance levels, by doing so the researcher will increase the likelihood of a statistical significant result something that in turn will reduce the risk of a Type II error (e.g., the odds of saying that there is no difference when in fact there is one). The downside with this is that we get an increased risk of a Type I error (e.g., the odds of saying there is a difference when in fact there is none). Therefore, as a way to obtaining results with reasonable statistical power the general recommendation is that more is better, in other words, a researcher should aim at having as large sample as possible. Large samples is also a good predictor of generalisability, or external validity, of a study, or the validity of generalised inferences in scientific studies (Dahmström 2000; Mitchell and Jolley 2001).

Small samples, often contained to a single geographical location (i.e., one workplace) with distinctive features (i.e., a particular ethnic group) are the most common cause of loss of external validity. As a result it is often very difficult, or impossible, to apply results from on particular study to people in other geographical locations or without these features. It is not uncommon that researchers attempts to balance internal- and external validity, the stronger the internal validity (causality between variable A and B) the less generalisable study results tend to be. Qualitative research has stepped away from the rigorous criteria's of experimental research and instead of talking about generalisability they use the term transferability which refers to the ability of research results to be transferred to situations with similar parameters, populations and characteristics (Lincoln and Guba 1986).

3.4.6 Incompatible samples

When conducting comparable studies it is vital that the surveys are done on population samples that are comparable to each other, in other words, that they have a similar gender-, ethnic- and cultural balance. A researcher may want to compare two different types of occupations, for example, hospital staff and police officers in order to determine how they deal with occupational stressors. In such a case the researcher may chose to draw a purposive sample since he or she wants to investigate a previously investigated phenomenon and therefore wants a sample that is relatively similar to the previously conducted study (Alston and Bowles 1998; Dahmström 2000). So even if the investigator in this particular example wants to compare two different occupations by looking at other characteristics beyond the occupation, for example, gender-, age structure, number of years in the occupation or some other variable it is possible to conduct a meaningful comparison.

But there are examples in this literature review where the researcher has chosen samples that are more or less incompatible with each other since they have chosen a study sample that differs both in size and characteristics.

Incompatible samples can also be caused by something that was discussed earlier in this section, that is, poorly defined methodology. When a research paper fails to give a clear description of how the study was conducted and under what conditions, including a

detailed description of the sampling characteristics, it creates a huge problem for any researchers wanting to carry out a similar study with a comparable sample. The best advice to any researcher would be to avoid using studies with insufficient information about study design when attempting to replicate a study.

A study that to a great extent demonstrates the use of incompatible samples was conducted by Allamani, Cipriani, Innocenti, and colleagues (Allamani, Cipriani et al. 1988). In their study of drinking patterns and alcohol consumption levels among Italian workers they compare data collected in 1977 and 1983 using different criteria's between the sampling occasions. Moreover, the 1977 study was a broad population study while the 1983 study was conducted on two different work areas. In addition the 1977 study used a sample proportion based on gender and age while the 1983 study focused on work sectors and occupational roles. This is a classic example of comparing apples and pears, by using two significantly different sample populations any comparisons between the studies becomes irrelevant and the external validity is at best limited. This is an example of a highly dubious way of conducting research and it raises questions regarding relevance of a study with this research design.

3.4.7 Problems with response rates

In most types of scientific studies there is likely to be some form of fallout between the calculated sample size and the amount of valid responses that the researcher ends up with, for example when conducting a questionnaire study. It is absolutely vital that the researcher account for any fallout and provide information of how large the fallout is, whether or not participants declined be in the study or other reasons they did not participate. In addition the researcher should indicate what he or she has done to minimise fallout and what steps they have taken to reduce the effect of individual and/or variable fallout. It is also important to attempt to determine what effects the fallout could have had on the end result of the survey and what consequences it may have had on the conclusions (Dahmström 2000).

Different methods are likely to produce various levels of response rates, much depending on the closeness to the survey population. In general, interview studies usually have higher response rates than, for example, postal surveys (Holme and Solvang 1997).
It is also important to separate individual fallout and variable fallout. The first one occurs when individuals in the selected sample, for one reason or another, refuse to participate in the study. The second one occurs when individuals decline to respond to a particular question, something that is often the case when the topic is of a sensitive nature as for example in the case of individual alcohol habits (Dahmström 2000).

The problem with large fallout is that it may create a skewed sample because, as a consequence, the researcher's theoretical sample characteristics change. People may refuse to take part in the survey or they may be unavailable due to other reasons, they may, for example, be illiterate or too old and sick to participate in the survey. When dealing with multiple ethnic groups there may be questions that are particularly sensitive and therefore some participants decline to answer that particular question or decline to participate in the study at all. One of the main problems is that it is impossible to determine the particular characteristics of those who declined to participate (Holme and Solvang 1997).

From the perspective of the critical literature review there are a number of studies that have been affected by one or two different fallout problems. Firstly, there are studies with very high fallout rates which have left the researcher with a small or very small sample. Something that is likely to affect the representativeness of the survey results and limit possible conclusions of the data material.

Secondly, there are studies , for example{ (Brooke and Price 1989; Bertera 1991; Towers, Kishchuk et al. 1994; Kjaerheim, Mykletun et al. 1995; Cook, Back et al. 1996ab; Tomiak, Gentleman et al. 1997; Tsukamoto, Hayashi et al. 1997; Lapham, Chang et al. 2000; Addley, McQuillan et al. 2001; Kivimaki, Kuisma et al. 2001) where the researcher has adjusted the response rates without providing any details, or rationale, to how and why this has been done. This has had the effect that the response rate has 'improved' without

additional information. There are examples where the response rate has improved with over 10 percent without any rationale as to why this happens.

3.4.8 Acknowledging confounding variables

Confounding variables are present in most types of research and perhaps even more so in studies investigating human behaviour. When conducting studies in a laboratory environment it is relatively easy to isolate a sample and eliminate most, or all, potential confounding variables. But for various reasons this is not possible when dealing with human beings who live an active life in close interaction with other human beings, at work or in their free time. What a researcher is faced with is a myriad of interacting, intervening variables that by themselves or in interaction with other variables my affect individuals or entire populations.

Due to the complexity of the system of human interaction researchers usually decide to study a limited number of factors, for example studying drinking patterns among high income earners living in a particular area. The focus may then be to separate the population based on gender to detect differences between men and women. The researcher may put people into different age groups to see if age is a determining factor. In addition, he or she might also want to try and find out if particular occupations differ in terms of drinking patterns and levels of drinking.

But beside those factors that the researcher decides to investigate there is the potential of numerous variables that may act as confounders and affect the end result of the study. For example, if we continue with the example mentioned above, an individual's religious affiliation may affect whether or not they consumes alcohol. Research has also found evidence that educational background can affect not only how much we drink but also when in life a person begins to drink alcohol. In addition to these potential confounders, there are a number of variables in an individual's private life that have been linked to levels of alcohol use, such as marriage status and family history. The list of potential confounding variables could be expanded significantly but that is beyond the scope of this thesis however researchers have to take potential confounding variables into account

when they conduct a study. Furthermore, the researcher also needs to acknowledge that there may be confounding variables in the study that may have affected the outcome of the study.

There are a number of studies in this literature review where the researchers have failed to acknowledge the potential impact of confounding variables and ways to reduce the potential effect of confounders. One example is a study was conducted by Eriksson and Olsson (Eriksson and Olsson 2001) where no discussion regarding confounding variables were held. In their particular case plausible confounders could have been unionisation among employees and to what extent the gender structure of the workplace affects the prevalence of alcohol and drug policies. The effects of leaving these potential confounders out of the equation can, based on findings in other studies that has found strong correlation between factors such as unionisation and gender structure within a workplace and drinking levels, result in a significant bias caused by, for example, by individual political agendas among union representatives. However there are measures that can be taken to circumvent the problems associated with confounding variables. One of those countermeasures will be discussed next.

3.4.9 The inclusion of too few confounding variables

It is also possible for a researcher to include too few confounding variables in a study. A number of researchers have acknowledged that their studies could have provided more conclusive results if they had taken into account additional confounding variables. When setting up a study every researcher has to walk the fine line of having too many or too few variables included in the data collection matrix. Hardly any researcher wants to have too few variables since that creates a number of problems. As mentioned earlier, investigating a limited amount of variables may leave the researcher with the problem of having to infer a conclusion based on a limited amount of data. Too few variables also make meaningful data analysis difficult since it may cause problems when attempting to determine correlation and causality. With too many variables the data material can become unmanageable, depending on how large the sample is and how much time and resources the researcher has to his or her disposal. Depending on methodology it can be difficult to overview and analyse the data, with an increased risk of missing out on valuable

information if the researcher is not careful. It can also results in decreased statistical power to detect an effect, particularly in smaller samples. There is also the ethical dilemma of wanting to collect data that may be good to have, just in case.

3.4.10 Lack of control groups

One way of determining the impact of confounding variables is to use a control group, to help the researcher control for variables outside those included in the intervention (Kumar 1996). For example, if a researcher wants to determine the impact of an educational program on the impact of alcohol on work performance by using a control group they can control for confounders such as advertising campaigns in the media that, if they occurred at the same time as the intervention, could affect the knowledge level of employees in a particular region.

Choosing a control group can be done in a number of different ways depending on the research design and where the research is conducted. If the researcher is following an experimental design then the total sample population is randomly split into a control group and an intervention group. But using control groups bring about the problem with contamination of data between intervention and control population. For example, when conducting a study with this type of experimental design where one worksite receives an intervention and another does not receive the intervention, or perhaps receives a different intervention there may be a risk of contamination between the two groups. This can result in changed behaviour, or responses, in the control group and the researcher ends up with contaminated data caused by the interaction between the two groups. One way to circumvent this problem is to separate the intervention and control site, e.g., geographically, to minimise the risk of cross contamination.

It is important to keep in mind that contamination problems is not the same as problems with confounding variables. Confounders exists in any type of study since they are a part of the contextual framework in which research is conducted, it is virtually impossible to eliminate every existing confounder and therefore a researchers has to take them into consideration and estimate to what extent they impact on the final outcome of a study.

Contamination on the other hand is closely linked to the design of a study and as such is more of a technical problem for the researcher to deal with in order to eliminate the risk of contamination (Dahmström 2000).

3.4.11 Other methodological problems

In addition to the methodological problems discussed earlier a number of studies are affected by additional, less frequent, shortcomings. In the following a short presentation of some examples of shortcoming will be presented.

A number of studies have a contamination problem between test and control group (Kronenfeld, Jackson et al. 1988; Anderson and Larimer 2002), this problem usually occurs when the two groups are in close proximity to each other, for example, in the same organisation or in the same geographical area. Then there is a risk that participants will talk to each other and this can in turn affect how an individual responds to an intervention and the results will therefore not be representative for either group. It is therefore vital that the distance between the test and control group is significant enough not to affect each other since this make it possible to control for various types of confounding variables that may be related to events like, for example, changes in legislation that would have an impact on all workplaces.

Numerous studies share a relatively frequent problem and that is that the study results may not be representative of and applicable to other similar worksites (Kishchuk, Peters et al. 1994; French, Zarkin et al. 1995; Cook, Back et al. 1996b; Cook, Back et al. 1996a; Cook, Back et al. 1996ba; Cook 1997; Hope, Kelleher et al. 1998; Jinks and Daniels 1999; Macdonald, Wells et al. 1999; Murphy, Beaton et al. 1999; Lapham, Chang et al. 2000; Park, Sprince et al. 2001; Anderson and Larimer 2002; Gerber and Yacoubian 2002). This issue often occurs when a study 1) has a relatively small sample size or, 2) investigates a relatively unique work setting, either in terms of population characteristics or type of industry.

3.5 Findings from high quality research evidence

After the above summary of the methodological shortcomings in the research conducted in the field of prevention of alcohol related harm in the workplace during the past 20 years a summary of the articles rated as being of high- or very high quality is presented. This will also become the evidence base in this field of research, based on best practice research. A small note to take into account is that even though articles in these two categories have been rated high or vey high quality, there are very few articles that do not suffer from some form of shortcoming. 36 studies were included in this group of high- or very high quality papers, 6 were rated as being of very high quality and 30 as high quality, or 34% of the total number of papers in this critical literature review.

One reoccurring question related to the harms associate with excessive alcohol use is "what does this cost society and the workplaces". The answer to that question is that it depends on what methodology has been utilised when calculating costs, and since it is very difficult to get an exact measure on the actual cost due to a number of confounding variables the best we can get is qualified calculations to what the cost might be.
In this review there are three different ways of calculating costs associated with alcohol use. Firstly, costs can be calculated by taking known factors, e.g., people active on the labour market and recorded alcohol sales figures, as this would produce more stable calculations rather than relying on sources that are known to produce significant bias, e.g., self-reported drinking data. (Hoyer, Nilssen et al. 1995; Leifman 2000). Secondly, due to the unreliability of self reported drinking data, it may be better to rely on proxy measures of alcohol related harm, for example data on night time traffic crashes and assaults, measures that have been showed to often involve intoxicated individuals. It is easier to estimate the cost from these types of measures since they are documented in hospital, police and insurance company records (Stockwell 1996). A third way of estimating alcohol consumption is to study particular drinking patterns, and this methodology was utilised by Devlin and colleagues (Devlin, Schuffham et al. 1997) when investigating the social cost of excessive alcohol use in New Zealand. What they found was that a 1 percent increase in excessive use of alcohol resulted in a loss of production in the range of 17-20 percent; which translated into financial figures (by 1991 monetary values) would result in an increased cost for employers of between $132 million to $222 million. In order to reach

this figure Devlin et al. included data from individuals active on the labour market that excessively used alcohol and then calculated that their work efficiency dropped by 25 percent, as a result of hangovers, feeling drowsy, or being intoxicated at work, for each day at work.

A similar study conducted in the UK, where it was estimated that approximately 2 percent of the working population, both men and women, could be defined as excessive drinkers. As a result thereof the cost attributed to lost production due to sickness absence, reduced efficiency and premature death reached somewhere between £350 million and £500 million (McDonnell and Maynard 1985). An interesting phenomenon was that an increase in excessive alcohol use was not followed by a corresponding increase in alcohol related harms but, rather, a disproportionate larger increase in harms. This phenomenon is further supported by results from a study conducted in Finland by Salomaa (Salomaa 1995), over a 10 year period which found that when there was an annual increase in alcohol use by 2.4 percent the direct costs attributed to the negative effects increased between 51 – 56 percent. In addition to that, the indirect costs of lost production through loss of quality adjusted life years were found to be substantially larger, approximately 3.5 – 4.9 times higher than direct costs. Similar findings were produced in a Canadian setting by Single and colleagues (Single, Robson et al. 1998).

Looking a bit closer to the factors behind these costs there are a number of studies that have investigated these factors. Gleason and colleagues (Gleason, Veum et al. 1991) found that approximately 9 percent, or 1,086 employees, of their study sample in the age group 19 to 27 years of age believed that their drinking had affected their work performance. When investigating potential differences between men and women they discovered that men were twice as likely as women to report that alcohol had interfered with their work and while 1.6 percent of females reported getting drug while at work, the corresponding figure for men was 4.4 percent. Even though people acknowledged that drinking might affect their work performance very few thought it would have any effect on their career. Similar results were found by French et al. (French, Zarkin et al. 1995), in their sample a small, but significant number of employees, approximately 10 percent, were absent from work or reported feeling sluggish after a drinking session. This study managed to find a

positive correlation between increased consumption levels and a decrease in work performance.

Fisher and Hoffman et al. (Fisher, Hoffman et al. 2000) found that heavy drinkers were more likely to report late for work than light drinkers and they were also more likely to leave work early. Similar to previous studies they also found that enlisted men and female and male officers who were categorised as heavy drinkers displayed decreased work performance, but no such connection was found among female enlisted soldiers. Results from Macdonald and Wells (Macdonald and Wells 1995) suggests that individuals that reported drinking more than 14 drinks per week were 1.6 times more likely to be involved in a workplace accident than non-drinkers. This risk was particularly prominent among employees aged between 15 to 34 years of age who were significantly more at risk of being involved in a job related accident than older workers.

From these findings it becomes clear that the cost associated with excessive use of alcohol is substantial on a national level as well as individual level. For employers costs are dues to decreased work efficiency, loss of production due to accidents and decreased working hours and increased sick leave and absenteeism.

The critical literature review revealed that alcohol related harm can occur in a great variety of industries and no workplace is immune against the potential harms associated with excessive drinking, irrespective whether the workplace is big or small. In the following section we will take a closer look at some of the determinants of prevalence of alcohol use in a workforce and various factors that can act as obstacles to and facilitators of successful implementation of interventions, aimed at preventing alcohol related harm in the workplace.

3.5.1 Organisational determinants

One important determinant for alcohol use in an organisation is the perceived availability of it in a workplace, including both social and physical availability. In a study conducted by Ames and Grube (Ames and Grube 1999) results indicated that social availability of alcohol was an important predictor of alcohol use. Social availability was defined as the sense of

level of perception regarding how much colleagues and friends were drinking. Their ethnographic data showed that physical availability of alcohol played an important role, a result that was confirmed by union leaders, managers, supervisors and security staff in the research site. Even though the company had an alcohol policy in place there were employees who consumed alcohol in the workplace and it appeared possible to consume alcohol at work without being detected. When investigating potential differences between salaried employees and hourly employees Ames and Grube found that as a result of infrequent work schedules, hourly employees perceived the drinking culture within the organisation to be more permissive.

It is apparent that the organisational culture is an important determinant for alcohol use since that sets the boundaries for those working there. This conclusion can be made based on findings of a study conducted by Ames and colleagues (Ames, Grube et al. 2000) on the importance of cultural norms. They compared an American owned and Japanese owned manufacturing plant, both located in North America. What they found was that in the Japanese plant where they had a well established, enforced and supported alcohol policy, the drinking norms were significantly less permissive, resulting in lower levels of alcohol at or in association to work than in the American owned plant. Employees in the Japanese owned plant also believed that they were at greater risk of getting caught if drinking at work than employees in the American owned plant. In relation to social and physical availability of alcohol at work employees in the Japanese owned plant thought it was more difficult to access alcohol then those working in the American owned plant. Approximately 75 percent of all employees in the Japanese owned plant had previously been working for a large North American corporation that had substantial alcohol and drug related problems. Now working in this new environment had resulted in less alcohol use at work and associated harms. An interesting finding highlighted by Ames, Grube et al. (Ames, Grube et al. 2000), a study characterised by solid methodology, utilising multiple methods, reasonable large sample and response rate and few methodological problems, was that employees in the Japanese owned worksite were less likely to report alcohol use at work than their counterparts in the American owned plant. A result that goes against the generally accepted relationship between high levels of supervision and less permissive drinking culture, particularly since level of permissiveness usually is directly correlated to

stronger levels of supervision. It is quite likely that this result could be a result of a workplace culture with higher levels of supervision than in American owned plants.

Historically an often sought solution to drinking problems among employees has been to treat it as an individual issue. More recent research promotes a more holistic approach, and this is supported by Bennett and Lehman's (Bennett and Lehman 1998) research. They found that as many as 40 percent of employees reported negative consequences from co-worker alcohol use, effects that were expressed through increased work related stress and impaired health status. Therefore, measures aimed at reducing alcohol related harm in the workplace should be aimed at changing workplace norms and attitudes and policies should encapsulate everyone working in the organisation, including senior management.

3.5.2 Individual determinants

In addition to the above mentioned determinants of alcohol use there are a number of personal variables that play an important role on consumption patterns and drinking levels.

There was a significant interaction effect between age and volume of alcohol consumed, with younger individuals, 18-25 years of age, consuming significantly more than other age groups (Midanik, Tam et al. 1996; Yang, Yang et al. 2001). Gender is a strong determinant on alcohol use and, as was found by Howland et al. (1996a), men in general show higher consumption levels than women. In their study men drank on average 2.19 drinks per day while women on average drank 1.89 drinks on a typical day. These findings were supported by results in a study conducted by Yang and colleagues (Yang, Yang et al. 2001) who also found that men experienced more alcohol related problems than women. In addition, marriage status is another determinant of alcohol. Research has found evidence that particularly young unmarried men are significantly more likely to consume more alcohol than married men and the same age group (Yang, Yang et al. 2001).

Several studies have also found compelling evidence that a person's work position is a strong determinant of alcohol use and a risk factor for alcohol related harm. When Howland and colleagues (Howland, Mangione et al. 1996a) investigated job situation

variables they found that functional area, i.e., what area/position the person was working in, was significantly associated with drinking levels and particularly managers in a sales position reported the highest levels of alcohol use. Similar results were found when Lehman and Bennett (Lehman and Bennett 2002) investigated whether high-risk jobs could be linked to increased alcohol use. Their results indicated that employees in high-risk jobs reported less job stress and a stronger drinking climate, that is, colleagues often got together after work to have a drink. These findings contradict the common perception that people in high-risk jobs are experiencing higher levels of work related stress which in turn results in higher levels of alcohol consumption compared to people working in low-risk jobs. So it may not be the level or risk per se that is the determining factor in individual drinking levels. The triggering factor appears to be whether the person experiences work-related stress or other psychosocial work environment factors. A study supporting this hypothesis was conducted by Moore and colleagues (Moore, Grunberg et al. 2000). Their results showed that participants who displayed the highest prevalence of alcohol related problems also reported significantly less job satisfaction, greater job related stress and they had more intent to quit their jobs than other respondents in the study.

The relationship between stress and health related outcomes have received significant attention over the past number of years and this relationship has been investigated from a number of academic perspectives. As will be discussed later, the relationship between the two is not linear and there are a number of other confounding variables that interact in the relationship and determine whether or not an individual will experience negative outcomes. Cooper et al. (Cooper, Russell et al. 1990) investigated the relationship between workplaces stressors and alcohol outcomes. Initially they found a significant correlation between the two, but after controlling for demographic and psychological confounders that relationship became non-significant. Their conclusion was therefore that there was no support for the theory that work stress and negative work-related emotions could predict alcohol related problems. What they did find, though, was that individual coping skills played a determining role on whether or not an individual would experience alcohol related problems: the less coping skill the higher the risk. These results have been further supported by a number of other studies identified in this review.

The following seven studies specifically investigated the relationship between coping skills and levels of alcohol use.

One of the more comprehensive studies in this area was a longitudinal study conducted by Hemmingsson and Lundberg (Hemmingsson and Lundberg 1998; Hemmingsson and Lundberg 2001). They found that men who reported excessive use of alcohol in adolescence and who were later in life exposed to a work environment where they felt alienated and had a low locus of control where more likely to develop alcohol related problems than other men. This was particularly evident when low work control was experienced in combination with low work demands and low levels of social support. What this would suggest that men who are experiencing a work environment with low demands express this by increasing their alcohol consumption. When comparing white-collar workers and blue-collar workers this phenomenon was prevalent among white-collar workers while those in blue-collar occupations did not express this pattern. One explanation could, according to the authors, be that men who already are excessive drinkers may be attracted to less demanding occupations with work environments over which they have little control. In addition, there was a time and accumulative factor involved where those who experience lack of control over their work over a longer period of time are more likely to respond with increased drinking than those who experience low sense of control for a short time.

A study that shows very similar results to Hemmingsson and Lundberg was conducted by Roxburgh (Roxburgh 1998). The results from this study indicated that when work tasks became more complex in nature, both men and women reported drinking less alcohol, a finding that remained significant even after controlling for other work conditions in relation to alcohol use. When studying the interaction between gender and job demands women who worked in highly demanding jobs were more likely to increase their alcohol use than women who worked in low demand occupations. Men and women showed a significant difference when working under adverse working conditions with men drinking significantly more than men working in a good work environment. Women, on the other hand, did not show such differences.

There is support for the finding that women in highly demanding jobs are more likely to consume more alcohol, as indicated in a study conducted by Sacker and colleagues (Sacker, Bartley et al. 2001). What they found was that women in higher professional and administrative occupations consumed more alcohol than women working in other positions, with the exception of non-skilled women or women working in agriculture who also were drinking at high levels. Women in this study also indicated that they associated drinking with good health. One reasons for this could, according to the authors, be that the women linked drinking to social support and active participation in sports. Two factors intimately linked to a positive health status. The importance of social support for women was further supported by findings by (Niedhammer, Goldberg et al. 1998).

The ability for an individual to make decisions about the organisation of his or her work has been found to be linked to levels of alcohol use. Studies by Martin, Roman et al. (Martin, Roman et al. 1996), Ragland, Greiner et al. (Ragland, Greiner et al. 1995), Niedhammer, Goldberg et al. (Niedhammer, Goldberg et al. 1998) found that men were particularly sensitive to levels of decision latitude, men who experienced that they had very little decision latitude also drank significantly more than their counterparts who did not share this experience. Both men and women expressed escapist reasons for consuming alcohol after work, drinking was used as a way to wind down after work, relieve pain, forget problems, or to increase their ability to sleep (Steffy and Laker 1991; Shore 1994; Ragland, Greiner et al. 1995; Martin, Roman et al. 1996; Niedhammer, Goldberg et al. 1998). There was also a time correlation involved in the relationship between increased alcohol use and how much time an individual spent time with colleagues after work (Ragland, Greiner et al. 1995; Martin, Roman et al. 1996).
There are, in addition to the factors mentioned above, additional lifestyle factors that have been linked to increased drinking levels. For example, individuals that smoke usually display higher drinking levels than individuals that do not smoke (Zwerling, Sprince et al. 1996).

3.5.3 Obstacles and facilitators of prevention programs

When attempting to implement health promotion programmes that include an aim to reduce alcohol related harm in the workplace, there is a number of obstacles and

facilitators that may determine the outcome of the programme. Ames and colleagues (Ames and Delaney 1992; Ames, Delaney et al. 1992) found in a comparison between two worksites a number of factors that can act as obstacles that may prevent successful implementation of new or existing programs. As they discovered there may be implicit or explicit agendas at various levels within an organisation. For example, union leaders considered alcoholism to be an illness and they were therefore strongly opposed any disciplinary actions against anyone who displayed alcohol related problems. In addition, there were union leaders with political agendas who only had one goal and that was to safeguard and protect their members. Senior management, on the other hand, did not see prevention of alcohol related harm as a priority. Their main priority was to keep production running. This made it impossible for supervisors to enforce the company's alcohol policy since it was likely to result in additional problems for the work crew and the foreman himself. All these problems was born out of an ill defined and poorly implemented alcohol policy, a policy in which no definition of alcohol related problems and when disciplinary action were appropriate.

One explanation to the managerial resistance in the study conducted by Ames and colleagues could possibly be found in the results of a study conducted by Bell and colleagues (Bell, Mangione et al. 1996). What they found was that approximately 80 percent of managers participating in their study expressed a lack of training in approaching employees with performance problems and that this in turn hampered their ability to deal with employees who were experiencing alcohol related problems. An additional obstacle highlighted was that many managers indicated that there were organisational factors that constituted significant barriers and almost 60 percent indicated that organisational softness towards alcohol related problems hampered their efforts to intervene. Similar results were found by (Ames, Grube et al. 2000). Managers working in blue-collar industries perceived more obstacles than their counterparts in white-collar industries.

The researchers found a linear association between the perception of barriers and the likelihood of implementing disciplinary action under various scenarios. For example, managers perceiving the greatest number of individual barriers were more likely to discipline than utilising EAP referrals or other informal methods when an employee where

caught drinking at work, without a drop in performance, or with a drop in performance caused by a hangover than managers who saw relatively few barriers. However, managers perceiving the greatest number of individual barriers were less likely to use disciplinary action against an employee under more ambiguous situations (e.g. when an employee arrive at work after lunch smelling of alcohol but does not show any drop in work performance). In contrast, the more serious the organisational barriers are the less likely the manager were to enforce disciplinary action, in circumstances like this the managers usually used an informal solution to the problem or refer the person to an EAP.
What we have seen here is a number of obstacles that can either hamper efforts to implement a prevention program or due to poor design and implementation render a prevention program dysfunctional.

On the other hand, as we shall see in the following, there are numerous factors that can act as facilitators for the prevention of alcohol related harm. Attempting to reduce alcohol related harm in the workplace can be variously implemented, but as research has demonstrated there are some factors that need to be taken into consideration in order to increase the likelihood of success. One of the most important factors is support from senior management, union representatives and employees. Without adequate support any type of intervention is likely to fail. Therefore it is vital to seek support from all groups that are affected by the intervention and one of the best ways is to keep a program as transparent as possible to avoid suspicion of hidden agendas from, for example, senior management to monitor employee behaviour. Howland and Mangione et al. (Howland, Mangione et al. 1996b) investigated the support for different types of alcohol screening among managers, first-line supervisors and workers. Results indicated that some 65 percent supported pre-employment screening and over 80 percent supported screening for alcohol after an accident where someone had received an injury. The participants were significantly less supportive of random testing at work sites with only 49 percent supporting such activities. There were few differences between any of the three groups in their support of pre-employment screening. Results also indicated that organisations with high levels of support for various types of screening were more safety cautious and had a lower prevalence of alcohol related problems than organisations where managers, first-line supervisors and employees were less supportive.

When comparing men and women, men were significantly more supportive of pre-employment testing and alcohol screening after an accident than women. Hope and Kelleher date also investigated whether there were any differences between occupational groups. What they found was the transport workers wore most supportive for all three types of screening, compared to sales- and service workers. Employees in manufacturing plants were most likely to support alcohol screening prior to employment and after an accident.

These findings provide important information when designing a prevention program aimed at preventing alcohol related harm since it provides clear guidelines as to what types of screening would have the highest rate of acceptance and be easiest to implement, that is, increase the success rate of a program.

There are other examples of brief interventions that have proven to be effective both in terms of improving general health and reducing alcohol use among employees. Addley and colleagues (Addley, McQuillan et al. 2001) found that health promotion programs that attempt to change lifestyle and use physical assessments as a tool can be effective in reducing alcohol consumption among participants. In their case approximately 50 percent of study participants reduced their alcohol intake, as well as adjusting their eating and exercise habits. This tells us that brief health promotion interventions can be a very useful vehicle for reducing excessive alcohol use in a workplace, on the other hand there was no tangible evidence to whether brief health promotion programs had any impact upon wider organisational issues such as productivity and absenteeism, an area which, according to the authors, required further investigation. But, as we shall see in the following, it is not enough to run a program to create sustainable change in an organisation. One of the most important components is to have a well defined, and outspoken, policy against alcohol in an organisation otherwise it runs the risk of becoming an obsolete piece of paper. Findings by Grube and Ames et al. (Grube, Ames et al. 1994) clearly indicated that employees who thought that drinking at work was acceptable and that they ran little or no risk of getting caught, and if getting caught there would be very mild consequences.

3.6 Summary

There are a number of conclusions that can be drawn from this review; the most important one is that the current evidence base for prevention of alcohol related harm in the workplace, based on best practice research is very thin. The majority of papers (66 percent, N=71) examined in this study were of reasonable or poor quality. Journal articles were affected by a range of methodological problems, including problems related to study design, sampling problems, problems related to confounding variables and other methodological problems. All these problems made it very difficult, and in some cases impossible, to draw meaningful conclusions from the findings presented.

Only 36 (34%) out of 107 peer reviewed journal articles were of high quality (N=30) or very high quality (N=6). This is a small number of articles, particularly since they cover prevention of alcohol related harms from different angles. The limited number of studies in any one domain seriously limits the ability to draw any major and generalisable conclusions. On the other hand there were some commonalities.

Costs are high

1. Firstly, excessive alcohol use produces significant costs, not only for individual workplaces, but for entire communities. These costs have been directly attributed to reduced productivity, up to 25 percent, either because an individual is absent from work and colleagues have to try and fill the gap by increasing their own production, or a person is at work but experiencing the effects of alcohol, either as a result of a hangover or because the person is intoxicated while at work.

2. Further costs can be attributed to loss of productivity due to early retirements or premature deaths as a result of excessive alcohol use over a longer period of time.

3. A common problem in the estimation of costs caused by excessive drinking was that they do not share the same methodology. There is a significant discrepancy in the way costs are calculated which in turn causes great disparity in the final results.

Organisational determinants have influence. These include:

1. Social availability of alcohol – has been found to be a strong determinant of alcohol use in a workplace, that is, if a person believes that friends and colleagues are drinking at certain levels it is likely that he or she will adapt their own drinking to correspond to the perceived level.

2. Physical availability of alcohol in the workplace – is another strong determinant of alcohol use and alcohol related problems.

3. Cultural norms in an organisation – determine levels of alcohol use, that is, organisations with more permissive drinking norms are more likely to display higher levels of alcohol use and alcohol related problems.

4. Holistic, whole of organisation approach – encapsulates the complexity surrounding alcohol use and alcohol related problems in the workplace since it incorporates interrelated issues, such as, work related stress and other health related problems and is therefore seen as a more effective way of preventing alcohol related harm.

5. Company investments in employees – organisations that invest resources in their employees have been found to have lower levels of alcohol related harm, as well as, employees with a better health status than organisations that do not invest in prevention-, health promotion programs.

Individual determinants are important and include:

1. Age – in general, it was found younger employees tended to drink at higher rates than older employees.

2. Gender – women usually drink less than men, irrespective of age.

3. Job position – is a more complex determinant and is closely interwoven with work related stress, job satisfaction and coping skills. However, research indicates that people who work in a more socially interactive environment, such as managers in sales, tend to drink more than managers in other positions.

4. Level of work related stress – is an important determinant of alcohol use, whereby increased work-related stress, especially in combination with lack of coping skills, results in increased drinking.

5. Personal coping skills – play a vital role in terms of how an individual deals with stressful life events, including at work and drinking is sometimes used as coping mechanism among individuals who lack adequate coping skills.

Obstacles to effective prevention includes

1. Poorly defined and implemented alcohol policies – policies that are poorly designed in the sense that they fail to clearly define issues like, for example, when it is appropriate to enforce disciplinary action if an employee is under suspicion of being intoxicated, or in other ways affected by alcohol. In addition, if a policy at the implementation stage do not have support by management and employees it is likely to be less effective or not work at all.

2. Lack of management skills and training on part of managers – were found to be linked directly to ineffective prevention programs and without adequate training it is very difficult to enforce a workplace program.

3. Permissive workplace culture – is an effective obstacle for most prevention programs since it is likely that employers and supervisors will ignore the policy, particularly if they do not see it as likely they will be detected drinking at work, and/or if detected there will be little or no consequence.

4. Perceived consequences of alcohol use by managers – is one of the most important obstacles because as long as managers, particularly senior management, do not see any consequences for the organisation from employee alcohol use it is unlikely that they will invest time and money on a prevention- or a health promotion program.

Facilitators of effective prevention include:

1. Support of programs from managers and employees – a strong predictor for successful preventative interventions is the level of employee involvement in the development, implementation and enforcement of programs aimed at reducing the harms associated

with excessive alcohol use. Employee involvement is a vital component in the development of local ownership of a program, to emphasise that it is 'their' program, and to increase the sustainability. But as has been identified by, for example (SOURCE), it is also absolutely vital to have the support of senior management if a program is going to be effective, as without that support any enforcement would be virtually impossible.

2. Holistic, health promotion approach - In order to be accepted by organisations and to provide effective preventative solutions the evidence points towards the utilisations of more comprehensive programs, preferable with a health promotion approach. Evidence indicates that health promotion can provide an effective vehicle for the reduction of alcohol related harm in an organisation (Addley, McQuillan et al. 2001).The reason for this is that, in many organisations, alcohol related issues were and still are sensitive issues and as such create barriers when attempting to prevent alcohol related harm in the workplace. It is less controversial to discuss health promotion and as part of a broader program include alcohol and drugs as two health related components.
3. Clear and well implemented alcohol policy – Research evidence indicates that a policy that is clear, transparent and well implemented is likely to receive support from managers, union representatives and employees alike.

In conclusion, this chapter presented a summary of the methodological shortcomings in 19 years of research on the harms associated to excessive alcohol use in or in relation to the workplace and summarised the current evidence base on prevention of alcohol related harm in the workplace.

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Addley, K., McQuillan, P. & Ruddle, M. 2001	X	X					X	X		
Allamani, A., Cipriani, F., Innocenti, S., et al. 1998		X	X			X				
Alleyne, B.C., Stuart, P. & Copes, R. 1991				X	X					
Ames, G.M. & Delaney, W. 1992		X	X							
Ames, G.M., Delaney, W. & Janes, C. 1992		X	X							
Ames, G.M. & Grube, J.W. 1999		X	X							
Ames, G.M., Grube, J.W. & Moore, R.S. 2000		X	X							
Ames, G.M., Grube, J.W. & Moore, R.S. 1997	X						X			
Ames, G.M. & Janes, C.J. 1992	X									
Ames, G.M. & Janes, C. 1987		X			X		X			
Anderson, A., Johnson, G.D., Gerald, L.B. et al. 1995		X								X
Anderson, B.K. & Larimer, M.E. 2002			X		X		X	X		X
Barrett, G.F. 2002	X									
Bell, N.S., Mangione, T.W., Howland, J., et al. 1996		X								X
Bertera, R.L. 1991	X						X			
Bennett, J.B. & Lehman, W.E.K. 1999a		X	X							
Bennett, J.B. & Lehman, W.E.K. 1999b		X	X							X
Bennett, J.B. & Lehman, W.E.K. 1998		X	X	X				X		
Brooke, P.P. & Price, J.L. 1989	X				X		X			

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Bertera, R.L. 1991	X	X	X							
Chen, P.Y. & Spector, P.E. 1992		X	X				X			
Cook, C.C.H. 1997	X	X					X			X
Cook, R.F., Back, A. & Trudeau, J. 1996a	X		X				X	X		X
Cook, R.F., Back, A. & Trudeau, J. 1996b	X									X
Cooper, L.M., Russell, M. & Frone, M.R. 1990		X	X							
Cunradi, C.B., Greiner, B.A., Ragland, D.R. et al. 2003		X	X							
Delaney, W.P., Grube, J.W., Greiner, B. et al. 2002		X						X		
Devlin, N.J., Scuffham, P.A. & Bunt, L.J. 1997										X
Eriksson M. & Olsson, B. 2001		X			X			X		
Fisher, C.A., Hoffman, K.J., Austin-Lane, J., et al. 2000		X			X					X
French, M.T. & Zarkin, G.A. 1995		X	X	X				X		
French, M.T., Zarkin, G.A., Hartwell, T.D. et al. 1995		X	X			X				X
Frone, M.R. & Windle, M. 1997		X			X			X		
Gerber, J.K. & Yacoubian, G.S. 2002		X			X		X	X		X
Gleason, P.M., Veum, J.R., Pergamit, M.R., et al. 1991			X					X		
Greenberg, E.S. & Grunberg, L. 1995		X	X				X			
Grube, J.W., Ames, G.M. & Delaney, W. 1994		X	X					X		

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Grunberg, L., Moore, S. & Greenberg, E.S. 1998							X	X		
Grunberg, L., Moore, S. & Anderson-Connolly, R. et al. 1999		X					X			
Hagihara, A., Tarumi, K., Miller, A.S. et al. 2000		X		X	X			X		
Harrison, J.E., Mandryk, J.A., Frommer, M.S., et al. 1993	X							X		
Heirich, M. & Sieck, C.J. 2000	X	X								
Hemmingsson, T. & Lundberg, I. 2001			X							X
Hemmingsson, T. & Lundberg, I. 1998			X							X
Hope, A., Kelleher, C.C. & O'Connor, M. 1998		X	X							X
Howland, J., Mangione, T.W., Kuhlthau, K., et al. 1996		X								
Howland, J., Mangione, T.W., Lee, M., et al. 1996		X	X							X
Imaki, M., Hatanaka, Y., Ogawa, Y., et al. 2002		X						X		
Jinks, A.M. & Daniels, R. 1999	X				X					X
Jones, S., Casswell, S. & Zhang, J-F. 1995		X	X	X				X		X
Kawakami, N., Araki, S, Haratani, T., et al. 1993		X	X				X	X		
Kenkel, D.S. 1997		X								X
Kishchuck, N., Peters, C., Towers, A.M., et al. 1994					X		X			X
Kivimäki, M., Kuisma, P., Virtanen, M., et al. 2001	X				X		X	X		X
Kjærheim, K., Mykletun, R. & Aasland, O.G. 1995		X	X				X			
Kronenfeld, J.J., Jackson, K.L., Davis, K.E. et al. 1988		X			X				X	X

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Landsbergis, P.A., Schnall, P.L., Deitz, D.K. et al. 1998		X	X		X		X			
Lapham, S.C., Chang, I. & Gregory, C. 2000	X					X	X			X
Lehman, W.E.K. & Bennett, J.B. 2002		X	X							
Lennox, R.D., Steele, P.D., Zarkin, G.A. et al. 1998	X							X	X	X
Lindquist, T.L., Beilin, L.J. & Knuiman, M.W. 1997		X	X							
Lockwood, A. & Saunders, B. 1993		X			X					X
Macdonald, S. 1995	X		X				X	X		X
Macdonald, S., Lothian, S. & Wells, S. 1998	X		X				X	X		X
Macdonald, S., Wells, S. & Wild, T.C. 1991			X				X			X
Mangione, T.W., Howland, J., Amick, B. et al. 1999		X	X	X				X		X
Martin, J.K., Roman, P.M. & Blum, T.C. 1996		X					X	X		
Mastrangelo, P.M. & Jolton, J.A. 2001		X	X	X	X				X	
McDonnell, R. & Maynard, A. 1985										X
Metcalfe, C., Davey Smith, G., Sterne, J.A.C. et al. 2003		X					X	X		
Midanik, L.T., Tam, T.W., Greenfield, T.K. et al. 1996		X					X	X		X
Moore, S., Grunberg, L. & Greenberg, E. 2000		X					X			
Moore, S., Grunberg, L. & Greenberg, E. 1999		X	X					X		
Murphy, S.A., Beaton, R.D., Pike, K.C., et al. 1999	X				X					X
Neil, C.C. 1989		X	X				X	X		

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Niedhammer, I., Goldberg, M., Leclerc, A., et al. 1998		X		X			X	X		X
Nowack, K.M. & Pentkowski, A.M. 1994		X		X			X	X		
Park, H., Sprince, N.L., Jensen, C. et al. 2001		X								X
Pollack, E.S., Franklin, G.M., Fulton-Kehoe, D. et al 1998	X			X					X	X
Pritchard, C. & McCarthy, A. 2002	X	X					X	X		
Ragland, D.R., Greiner, B.A., Krause, N. et al. 1995		X	X					X		
Richmond, R.L., Wodak, A., Bourne, S., et al. 1998		X	X				X	X		X
Richmond, R.L., Wodak, A., Kehoe, L. et al. 1998		X	X							
Roberts, R. 1988		X					X	X		
Roberts, R., Cyster, R. & McEwen, J. 1988		X					X	X		
Rout, U. & Rout, J.K. 1997		X	X		X		X			
Roxburgh, S. 1998		X	X							
Sacker, A., Bartley, M., Firth, D. et al. 2001		X								
Salomaa, J. 1995	X									
Shore, E.R. 1997			X				X			
Shore, E.R. 1994		X	X		X		X			X
Single, R., Robson, L., Xie, X., et al. 1998										X
Spicer, R.S., Miller, T.R. & Smith, G.S. 2003								X		X

Table 3.2 Methodological problems in examined literature

AUTHOR(S)	Ill defined methodology	Cross-sectional studies	Self-reported drinking data	Reliability and validity problems	Sample size	Incompatible samples	Response rate	Confounders	No control group	Other problems
Stallones, L. & Xiang, H.			X	X						X
Steffy, B.D. & Laker, D.R. 1991		X	X	X				X		
Stoltzfus, J.A. & Benson, P.L. 1994			X		X			X	X	X
Tomiak, M., Gemtleman, J.F. & Jette, M. 1997	X	X	X					X		X
Towers, A.M., Kishchuck, N., Sylvestre, M., et al. 1994	X				X					
Tsukamoto, K., Hayashi, T., Suzuki, T. et al. 1997	X	X	X					X		X
Upmark, M., Möller, J. & Romelsjö, A. 1999	X		X	X	X					
Vuori, J. 1994	X		X		X					X
Webb, G.R., Redman, S., Hennrikus, D.J. et al. 1994		X					X	X		
Wells, S. & Macdonald S. 1999		X						X		
Wilson, M.G., DeJoy, D.M., Jorgensen, C.M. et al. 1999		X						X		X
Wynn, P.A. 2000								X		
Yang, M.J., Yang, M.S. & Kawachi, I. 2001		X								
Yen, I.H., Ragland, D.R., Greiner, B.A. et al. 1999		X	X				X	X		
Zarkin, G.A., French, M.T., Mroz, T. et al. 1998	X	X				X		X		
Zinkiewicz, L., Davey, P., Obst, P. et al. 2000		X					X	X		
Zwerling, C., Sprince, N.L., Wallace, R.B. et al. 1996		X						X		X

CHAPTER FOUR
PHASE 2: KEY EXPERT QUESTIONNAIRES – METHODOLOGY AND RESULTS

4. Introduction

The critical literature review provided the researcher with vital information regarding the research base in the area of alcohol related harm in the workplace, and guided the design of the second part of this study. The lack of high quality articles and the lack of research aimed at investigating prevention of alcohol related harm in the workplace made it difficult to define the meaning of best practice with respect to these issues. Therefore, the new objective of the second phase of this study was to investigate and define the components necessary for 'best practice' in the area of preventing harm related to alcohol use in the workplace. This was achieved by interviewing leading experts in the field, from all around the world but predominantly from English speaking countries.

4.1 Methodology of interviews with key experts

Key experts/researchers were identified through the extensive literature review. The selection process was based on two criteria. Researchers with a focus closely related to the topic of this particular thesis were identified; and then they were ranked according to the number of published articles in peer reviewed journals.

The selected experts were then individually contacted via e-mail and requested to participate in the study, by providing information about what they considered to be the main obstacles and facilitators of prevention strategies. In addition, all key experts were asked to name five people who they also considered to be scholars in this area, this methodology is called "snowball sampling". In this way, a good representation of the "small world" of expertise in preventing alcohol and other drug problems in the workplace was identified and accessed. The sampling process was terminated when the same name appeared more than once.

4.1.1 Questionnaire design

Due to the overall lack of research aimed primarily on preventing alcohol related harm in the workplace, no validated questionnaires were available for interviewing key experts. Therefore, a questionnaire was specifically designed and developed for this study. The questionnaire was exploratory in design with open ended questions, in order to get as much information as possible using relatively few questions. The information gathered

during the critical literature review was utilised to develop the questions. The questionnaire was then pilot tested on a group of 10 experts from both English and non-English speaking countries to determine validity, and finally adapted on the basis of those responses. Each expert was asked to record the time it took to complete the entire questionnaire. In addition they were also asked to give feedback on each question to determine whether the question was unambiguous in design. If questions were deemed to be confusing or ambiguous they were rewritten until clarity was achieved. The final version of the questionnaire is located in Appendix 5.

All participants were informed that their responses were completely confidential and that by completing the questionnaire, the participant gave the researcher their informed consent. Each participant received written information about the purpose of the study, the overall content of the questionnaire and approximately how long it would take to complete the questionnaire. The information sheet is available in Appendix 4.

The questionnaire was divided into the following sections:

1. Background information: age, country of residence, educational background and highest educational award.
2. Number of published articles in peer reviewed and non-peer reviewed journals focusing on:
    a. The broad community
    b. The workplace
3. Work experience with prevention of alcohol related harm in:
    a. The broad community
    b. The workplace
4. Current occupation and role
5. Obstacles to work effectively with prevention of alcohol related harm in:
    a. The broad community
    b. The workplace
6. Facilitators to work effectively with prevention of alcohol related harm in:
    a. The broad community
    b. The workplace
7. Organisational size as a factor to take into consideration

8. Key factors that may encourage or discourage organisations to work with prevention of alcohol related harm in the workplace
9. Special target groups
10. What to do and what not to do when working with prevention of alcohol related harm.

The participants were informed that the questionnaire was to be filled in directly on the computer screen. Each question was followed by an empty box for respondents to write their answers. Once completed, the questionnaire was saved as a word document and sent to the researcher via e-mail.

The final questionnaire contained a cover sheet containing instructions and 5 pages containing 28 open ended questions covering the topics described in more detail below.

4.1.1.1 Background information

This information was gathered to get an idea about each expert's age and country of residence. Each participant was also asked if their educational background was from:

a) Psychology
b) Sociology
c) Medicine
d) Social work
e) Health promotion
f) Anthropology
g) Economics
h) Occupational health and safety, or
i) Others

In addition, each participant was also asked to indicate which their highest academic award was:

a) Bachelor degree
b) Honours degree
c) Postgraduate diploma
d) Masters degree
e) PhD, or
f) Other, please identify

4.1.1.2 Number of peer and non-peer reviewed publications

As indicated previously, the number of articles published by an author was one of the indicators used to identify experts during the critical literature review phase of the study. In addition, in order to identify articles published in peer reviewed journals and in other types of publications, each participant was asked to indicate how many published articles and papers they had published in the area of prevention of alcohol related harm. This was determined important in order to evaluate the overall production of each expert and by doing so get an indicator of his or her impact in the field.

Each participant was also asked to indicate whether the published article focused on prevention of alcohol related harm at a community level or in the workplace.

4.1.1.3 Work experience

While the amount of publications in peer reviewed journals and in other types of press, may be an indicator of academic production, it may also be limited, for example by representing a pure theory based experience. The level of work experience is a more appropriate qualitative measure of practical experience in the field. A person may "lack" the academic qualifications but that does not necessarily disqualify them from being classified as an expert in prevention of alcohol related harm. Many individuals have through years of practical experience built up a knowledge base of what is good practice , what works and what does not work when attempting to introduce and implement policies aimed at preventing alcohol related harm in the workplace. In an attempt to identify these individuals, a measurement of work experience was included into the instrument by asking each participant how many years they have worked with prevention of alcohol related harm in various functions.

4.1.1.4 Current occupation and role

Another way to determine work experience was to examine the expert's current occupation and their role in the prevention of alcohol related harm. Since many people in the academic world often have various roles, sometimes they may work in academia at the same time as they work in different non-academic projects. It was therefore of interest to find out to what extent the experts have other commitments and what roles they have in the respective projects. The idea behind this was to get an understanding of the expert's ability to interlink theory and practice and the extent to which this occurs.

4.1.1.5 Obstacles to effective harm prevention

As part of best practice it is of vital importance to understand the potential obstacles that could cause problems, or even halt, the implementation of an alcohol related harm prevention program. Therefore, each expert was asked to identify potential obstacles that they had encountered in their research or in their practical work with workplaces and communities. The rationale behind asking questions related to the workplace as well as the broader community was to obtain potential leads or learn valuable information regarding obstacles experienced by the experts when working with different community groups.

4.1.1.6 Facilitators for effective harm prevention

Just as there are obstacles to implementation of prevention programs in the workplace there may well be various facilitators that could work as vehicles easing the implementation of such programs in the workplace. There may be internal as well as external factors that positively affect the outcomes of program implementation procedures and therefore the experts were asked to identify factors that could work as facilitators. In order to determine best practice it was vital to understand those factors that may work as obstacles and facilitators when attempting to implement a prevention program.

4.1.1.7 Organisational size a matter of consideration?

There are numerous arguments as to why one should or should not take organisational size into consideration when designing and implementing a policy. Large organisations have been classified as immovable objects that have solidified due to their mass. An organisation that reaches this stage is believed to be more or less paralysed or at least very slow to respond to an approaching crisis. On the other hand, large organisations have also been recognised as having the resources to work with health promotion responses.

Arguments and theories regarding small organisations follow a similar pattern. Small organisations are often believed to be flexible and as such well equipped to respond to changing circumstances, and should therefore find it relatively easy to implement health promotion programs. On the other hand, small organisations have also been characterised by their close-knit relations between management and employees and on occasions the boundaries between these two groups are unclear. When dealing with sensitive issues it has been recognised that this relationship could become a burden and an obstacle to responding to an emerging crisis such as when one person is affected by alcohol related problems. On such occasions the liability of close relationships might put management and

colleagues in a very difficult position. Therefore, the question was: should an organisation, depending on its size be treated differently than other organisations?

4.1.1.8 Key factors that may encourage or discourage an organisation to work with prevention

The participants were also asked to identify key factors that could either encourage or discourage an organisation to work with prevention of alcohol related harm in the workplace. The results of the critical literature review indicated that there were factors that impacted on the willingness of an organisation to invest in a prevention program. Some examples of incitements for an organisation to invest time and money in a prevention program were lowered medical insurance costs and various benefits from the government to organisations that invest in these programs. On the other hand, there were also indications of factors that could discourage many organisations to work with prevention of alcohol related harm. Some examples were the fear of being labelled as an organisation with problems, and unclear benefits of investing in a prevention program.

4.1.1.9 Specific target groups

For the past several years there has been an ongoing discussion as to whether special groups should or should not be targeted when dealing with alcohol related problems. Some have argued that focus should be placed on particular risk groups, not necessarily because they are particularly prone to alcohol related problems but because they hold high risk positions, and therefore an alcohol impaired individual in such a position might put others at risk. Examples of such positions are staff working in nuclear plants, aircraft crews, train drivers, medical staff or those working with children or the elderly. Others have argued that in order for a policy to be effective it needs to target everyone working in an organisation, especially when there are organisations without any readily identifiable high risk groups. There were several reasons for this but one of the strongest arguments that evolved from the critical literature review was the issue of fairness. One reason, which has been particularly emphasised by unions, is that no single group of people should be targeted, but all employees and managers should be part of the program. Another reason was the impact factor; namely a program aimed at the entire organisation was more likely to be effective when it had the support of the entire organisation. Therefore it was necessary to investigate whether or not the experts considered it important to target specific groups, and also what was their rationale for targeting specific groups or involving the entire organisation.

4.1.1.10 What to do, or not do, when working with prevention

Finally the experts were asked to identify things to embrace and things to avoid when working with prevention of alcohol related harm. Depending on whether one works with the community at large, with government organisations or with private companies, one may have to approach the topic of prevention of alcohol related harm from slightly different angles. Especially interesting for this particular study were the potential differences between government organisations and private enterprises, mainly because in private enterprises, the interest was focused on cost and benefit. As the critical literature review indicated, before a private company invested in a prevention program they wanted a clear picture of the potential benefits, and preferably the financial gain. In recent years though, government finances have become restricted. As such, government organisations also had to think in terms of maximum gain for minimum of investment. It was therefore deemed of interest to see if the experts would identify different things one should do or should not do depending on whether one is dealing with the broader community, a government agency or a private company.

4.1.2 Analysis

Various methods were used to interpret and analyse the collected data to determine not only how strong the relationship between different factors was but also how they influenced each other. Since this study utilised both qualitative and quantitative data, the range of instruments used was quite diverse. Text analysis was the main method for analysing qualitative data while the quantitative data was analysed using the SPSS software package.

Since the interviews with key experts relied totally on open ended questions where the respondents had to write their sometimes lengthy answers, the methods used to decipher this information was text analysis. Text analysis or content analysis can broadly be defined as *"any technique for making inferences by objectively and systematically identifying specific characteristics of messages"* (Holsti 1969), p.14. Text analysis can basically be carried out in two different ways, either by using a computerised knowledge mining system or if the data material is limited, it can be done manually (Stemler 2001). Data material for this study was relatively limited and therefore it was decided to systematically go through collected data manually in order to examine potential trends and patterns. The purpose of using text analysis in this study was to identify contextual factors that may affect how work with prevention of alcohol related harm is approached.

The open ended questions were analysed for common or recurring themes to detect indicators of good practice and also to identify obstacles and facilitators. The findings were then summarised and catalogued into a table for easy access and to assist with the extraction of the main findings.

4.2 Results of interviews with key experts

The questionnaire was sent to 56 key experts from around the developed world and 17 responded (a response rate of 30 percent). Out of the 17 experts who responded 4 did not complete the questionnaire as they did not consider themselves experts in the area of interest. Therefore, the final number of experts used in this phase of the study was 13, giving a response rate of 23 percent. Due to the character of the questionnaire it took the respondents between 45 minutes and 3 hours to complete all questions, depending on how much information they provided. Each expert was asked to answer 12 questions and the summary of those questions are presented in the following sections. Considering the primary purpose of this study is to investigate the evidence base for best practice only the components that were addressed by a majority (ie more than 50 percent) of the experts will be presented.

4.2.1 Key factors for best practice

When interviewing numerous key experts there is a significant likelihood that the responses diverge to a great extent and therefore it was decided at an early stage that responses, similar in context, given by the majority were given preference for answers given by fewer key experts. Although the sample size was very limited this methodology was used consistently in the analysis of the responses provided by the key experts. Due to the small sample size only two key factors were identified as necessary for effective and best practice when attempting to prevent alcohol related harm in the workplace, and these are presented in Table 4.1 below.

Table 4.1: Key factors needed to ensure best practice

Key factors to best practice
• Comprehensiveness
• Universal application

4.2.1.1 Comprehensiveness

Similar to findings of the critical literature review, seven of the experts raised the need for comprehensiveness, in particular programs not focused solely on alcohol but on the entire context in which men and women work. This also implied, as one participant highlighted, that the entire context needed to be put into the equation and as such prevention programs developed for work could be adopted in the broader community.

One of the strongest arguments for an increased comprehensiveness in both the critical literature review and among experts was the possibility of incorporating prevention of alcohol problems into health promotion. By using health promotion as a vehicle for preventing harmful alcohol use it was argued that it would lead to a more positive approach and consequently to healthy behaviour.

From the view of organisations, a comprehensive approach with a clear health promotion theme could help remove the fear among many organisations of being labelled as a problem organisation. Similarly, men and women would be less likely to run the risk of being labelled as problem drinkers and be keener to participate in health promotion initiatives, especially if the employer provides positive feedback to those who participate.

Another component that is likely to reduce resistance from managers, but potentially more so, from employees was a shift in focus to organisational issues, such as psychosocial issues, rather than focus on individuals who are experiencing alcohol problems.

This response was closely connected with ideas of a proactive approach, namely the elimination of potential causes of problems rather than targeting specific individuals. A reoccurring feature of modern working life, and something regularly reported in research and in media, is the ever increasing stress that employees experience. Men and women with adequate coping skills may be able to counteract stress that is related to high workloads and/or the challenge of combining family life with the escalating demands of working life. But those who lack adequate coping skills may turn to alcohol as a way to unwind after a challenging day at work.

With a focus on organisational issues, the responsibility for employees' well-being is moved from the individual and onto the organisation. Research has pointed out that employees, particularly highly educated or trained ones, were immensely expensive to replace or to

have missing from work (Jones, Casswell et al. 1995; Bolin, Jacobson et al. 2002). Therefore it is justified to focus on potential causes of problems rather than wait for individuals to develop problems, which in the end can result in excessive alcohol use. An organisational overhaul is also likely to have a positive impact on all employees rather than a selected few. Such an overhaul could detect issues in the psychosocial work environment, such as the finding that employees in one section of the workplace are experiencing higher workloads than others. This workload imbalance, if not restored, could result in affected employees feeling that they are not treated fairly by management and/or lead to stress related issues. These factors then could result in an increased consumption of alcohol among a number of individuals whom in the long run might develop to alcohol related problems.

Another reason for changing focus from individual to organisation issues is to avoid labelling individuals with alcohol related problems as problem employees. One potential risk of more comprehensive programs could be that sensitive problems, such as alcohol related problems, become pushed aside in favour of more popular topics. But following the more or less unified perception that comprehensive models are the way of the future, especially if they have a proactive approach with health promotion as leading component, this risk is worth taking since most researchers appear to think that there is much to gain. For example one expert stated that a program should

> *"Target the issues that contribute to and maintaining AOD related harm; it should target systems (culture; management etc) not just individuals; ensure that there is adequate support for strategies; ensure that only evidence based approaches are employed; use specific strategies for specific problems/risks and adapt the program to suit the individual characteristics of each workplace identifying and supporting protective factors."*

4.2.1.2 Universal application

Throughout history, employees have been the main target when working with alcohol related harm, and efforts aimed at an entire organisation have been rare. Seven of the experts raised this problem and believed that only when all employees, at all levels of an organisation, are targeted can good practice be achieved.

There are several reasons why the whole employee group, including management should be targeted when attempting to prevent alcohol related harm in the workplace.

Previously, most programs aimed at preventing alcohol related harm in the workplace had a focus solely on employees, with those in management positions being excluded. One reason could be that the main interest of the managerial group was to monitor employees in risk of developing alcohol related harm. But it is important to remember that individuals in managerial positions are just as much at risk of developing alcohol related problems as anyone else and therefore it is important to target management as well as the rest of the employees.

Another very important reason for targeting the entire workforce has to do with trustworthiness. By showing the employee group that the management falls under the same scrutiny as the employees will result in improved confidence and trust and this in turn could counteract any concerns about double standards with different rules for management and employees. As stated by one expert:

> *"A good workplace program aims to promote the best outcome for management, workers and shareholders. It will include good health promotion provisions, not just screening for diminished work performance and taking action, not just focusing on the least powerful (the rank and file workers) but will have consistent standards and provisions across the board."*

4.2.2 Obstacles

No conclusive evidence was provided by the experts when asked to identify potential obstacles. The only component that was mentioned on a relatively regular basis was that a too narrow focus could act as an obstacle since they are likely to miss variables in the occupational context that may play an important role in the aetiology of alcohol use and thereto associated harms. For example, psychosocial work conditions are a known factor when determining the prevalence of excessive alcohol use but if that variable is overlooked then the prevention program is highly likely to be less effective.

4.2.3 Facilitators

Very limited evidence was provided regarding facilitators of best practice when attempting to prevent alcohol related harm in the workplace. The only facilitator for prevention programs that were addressed repeatedly was a clear relationship between cost and benefits. As mentioned previously, cost is important in decisions about whether to

implement a policy or not. The experts considered it to be one of the main obstacles. Eight experts highlighted the importance of demonstrating a clear relationship between cost of a program and its benefits. This has, as been mentioned previously, been quite difficult. This relates to the methodological problems that research has faced when attempting to measure prevalence of excessive alcohol use and to measure costs associated with excessive alcohol use. Therefore it is of utmost importance that models aimed at preventing alcohol related harm are evidence based. This can be illustrated by the following quote:

> *"Key factors will be: (1) when stakeholders recognise that the strategies are cost effective (provide positive ROI); and (2) when stakeholders recognise that effective interventions are available that are relatively low-cost and easy to implement. In addition, to the extent that the workforce at a particular workplace exhibits high prevalence of alcohol problems and there are safety issues; the workplace will be further encouraged to adopt prevention strategies."*

4.2.4 Target groups

There was no conclusive evidence suggesting that there was any need to focus on any particular target group when developing proactive programs aimed at preventing harms associated with excessive alcohol use.

4.2.5 Size of organisation

There has been an ongoing debate regarding whether or not small organisations need to be treated differently to large ones. The experts indicated there was such a need. Eight of the participants believed that small organisations should be treated differently; three said that there was no need to treat them differently while two did not answer the question. Those who believed that organisational size was an important issue that should be taken into consideration stated that:

> "*Typically, small and medium sized businesses do not have the human resource infrastructure or budget to apply to the prevention of alcohol related harm; interventions need to be tailored to such organisations."*

One expert suggested that one should not be blindsided just by organisational size but there is a need to take cultural difference into consideration.

> *"It is not just size that needs to be taken into consideration but the composition of the workforce that is important, ie alcohol harm reduction approaches and the methods by which they are developed and implemented need to be structured to fit with the workplace culture."*

4.2.5.1 Small organisations have more specific needs

Seven of the experts said that they believed that small organisations need to be treated differently because they usually have more specific needs than larger organisations. Smaller organisations are usually not as diversified as larger organisations and may be more specialised in the services or products they provide. Therefore, in order to get the most out of a prevention program, they may require a tailored model that takes the organisation's unique characteristics into consideration.

> *"Smaller organisations may need more specific resources and support. Big organisations may have access to OHS staff and medical staff and EAP's. Smaller organisations may not be well resourced to do this. Small organisations may have additional 'cultural problems' eg if family members are part of this it can make handling sensitive issues like hazardous drinking quite difficult."*

4.3 Summary

This survey on key experts provided a limited image of what constitutes best practice and what may act as facilitators or obstacles when attempting to implement programs aimed at preventing harms associated with excessive alcohol use. The only evidence for best practice that can be drawn from this chapter was that two components of best practice, comprehensiveness and universal application, were supported by a majority of key experts.

CHAPTER FIVE

PHASE 3: QUANTITATIVE SURVEY OF MANAGERS AND EMPLOYEES – METHODOLOGY AND RESULTS

5. Introduction

Chapter five will present the methodology and findings of a questionnaire survey conducted on white-collar workplaces in Sweden.

5.1 Methodology

The final phase in the research design and the final step of the data collection was a survey of managers and employees. Previous research has mainly focused on the manufacturing and transportation industries. Due to changes of the labour market and increasing expansion of white-collar jobs, mainly in the service industry, and due to the paucity of research on this latter category, it was decided to target these organisations in this study.

5.1.1 Survey population

The target group for this phase was made up of white-collar organisations with a minimum of 15 employees. The reason for choosing white-collar organisations was the paucity of relevant research carried out on this type of organisation. Organisations with less than 15 employees were not included in the target group due to their organisational structure. Smaller organisations with less than 15 employees often get the characteristics of a family company with close relationships between colleagues and management.

In order to detect a small effect size probability of .05 the power analysis recommended a minimum sample size of 200 questionnaires. An anticipated dropout rate of 20 percent was estimated and therefore it was decided to increase the minimum sample size to 240. This number of questionnaires was then distributed out to 40 organisations with 5 employees and 1 manager from each organisation participating in order to allow valid statistical analysis. The rationale for selecting one manager and five employees was to lessen the workload on the organisation and ensure a higher participation rate.

5.1.2 Selection criteria for recruiting organisations

Working with a sensitive topic such as alcohol use in the workplace it was acknowledged from the beginning that it would be difficult to commit workplaces to participate. One way of limiting the risk of non participation due to resistance was to use organisations in Sweden, where most workplaces have been concerned with these issues, usually through the introduction of alcohol policies. Secondly, the organisation funding this research, the Alna Riks, has several hundreds of Swedish membership organisations from both the public and private sector. To ensure homogeneity and decrease bias, the researcher requested Alna Riks to identify companies and organisations from all over Sweden.

The selection criteria when selecting companies were as follows:

- The organisation should have an active alcohol policy
- It should be a white-collar organisation
- One representative in management position, preferably the person in charge of the policy program should participate, and
- Five employees should participate.

At the beginning of the study, Alna Riks agreed to contact, inform and commit the minimum number of organisations (40) for participation in the study. A major reason for utilising Alna Council's membership companies was to ensure participating organisations had an existing alcohol policy as development of an alcohol policy was one of the main functions of a partnership between Alna Riks and a company. The second major reason for going through Alna Riks was their assurance to facilitate access to their member organisations and their guarantee to commit the necessary number of companies to participate in the study, which in turn was assumed to guarantee the minimum amount of respondents.
An information package was developed by the researcher for the Alna Riks to use for this purpose. The package contained an information leaflet detailing the purpose of the study (Appendix 8), a written statement that by completing the questionnaire the respondent gave their informed consent to participate in the study (Appendix 3), the method of data collection, the estimated time needed to

complete the questionnaire and a confidentiality agreement. This latter information leaflet is available in Appendix 9.

The actual selection process for choosing organisations for the study was conducted by the Alna Council without any influence of the researcher. The researcher was forbidden to contact organisations on his own to ensure the confidentiality agreement between the organisations and the Alna Council was maintained. Initial contact between the researcher and the participating companies was established only after Alna Council gave permission in the form of a list of companies and contact persons.

5.1.3 Development of survey instrument

Due to the overall lack of research on prevention of alcohol related harm in the workplace, no validated questionnaires were available that suited this study. Therefore, a questionnaire was specifically developed. Initially, a model developed by Duffy and Ask (Duffy and Ask 2001) was used as a template for the structure of the critical literature review and when developing the initial survey instrument for the key experts. In order to be able to talk about quality practice when attempting to prevent alcohol related harm in the workplace Duffy and Ask suggested that the following 10 components should be included, as well as the rationale to why they are important for quality practice.

- **Consultation/Inclusiveness**

  Credibility is a vital component of any program intended to prevent harms associated with excessive alcohol use; this is something that can be created through an inclusive consultation process during the policy development phase (Milne 1995; Duffy and Ask 2001). The importance of consultation has been acknowledged by policy theorists and its main purpose is to determine goals and procedures that are mutually acceptable by everyone affected by the policy (Bridgman and Davis 1998). Consultation during the development phase of a policy assists in developing local ownership over the program and this in turn increases its acceptance by all parties. The consultation process

can also assist in uncovering hidden aspects of workplace cultures that otherwise would have gone unnoticed (Carr 1991; Lockwood and Saunders 1993).

- **Universal application**

  A policy needs to be aimed at everyone working in an organisation, including subcontractors and temporary employees, otherwise it is at great risk of causing resentment and become significantly less effective (Duffy and Ask 2001). Universal application and employee acceptance is intimately linked to each other and it is absolutely vital that the policy clearly states that the policy adhere to everyone, i.e., all directors, management and other employees, including contractors, and that it includes all worksites (Nicholas, Allsop et al. 1996).

- **Organisational specific**

  21th century organisations are inherently complex and not one organisation is identical to the other and as a result policies need to be adapted to reflect these unique conditions in order to be effective in reducing alcohol-related harms in the workplace. Effective prevention depends upon a range of contextual factors that affect the organisation, as well as interpersonal relationships between management, employees and other parts of the system (Holder 1990; Duffy and Ask 2001). Therefore, effective policies need to be organisation specific and take into account the workplace culture and the specific need of the individual organisation. This is also why generic policies have a tendency to fail as they are not organisational specific.

- **Comprehensiveness**

  In order for an alcohol policy to be effective it needs to be comprehensive in nature and not merely instruct about alcohol use at work (Nicholas, Allsop et al. 1996). A policy should contain clear statements related to the prohibition of manufacturing, possession, sale, distribution or use of alcohol on the premises of the organisation; this may include multiple worksites, unless

approved by senior management (Allsop, Bush et al. 1997b). A policy that does not inform about the procedures that are in place to respond to alcohol use in the workplace is insufficient (Want 1993).

- **Instructions and procedures for responding to drug- related incidents**
  For a policy to be effective it needs to have clear instructions and procedures on how to respond to and approach someone who is under suspicion of being under the influence of alcohol. Part of this includes information regarding what kind of treatments are available (e.g., counselling, interview procedures) and who, within the organisation, is responsible for approaching the person impaired by alcohol. In addition, the policy needs to include unambiguous statements regarding disciplinary action (Allsop, Bush et al. 1997b; Duffy and Ask 2001).

- **Drug testing**
  A component that needs to be taken into consideration when developing a policy is whether or not the option of testing for alcohol should be included. A starting point for determining the inclusion of testing procedures is to what extent the strategy improves the safety and productivity of the workforce (Nicholas et al., 1996). Based on this particular criterion it is possible that many workplaces would have little to gain from including testing, if it is decided to include this kind of strategy it should be part of a more comprehensive scheme where the aim is to reduce alcohol-related harm in the workplace (Nicholas, Allsop et al. 1996). When drug testing is included it needs to be accompanied by a strong rationale to why drug testing is part of the policy, what the intentions are and potential consequences for the individual worker if detected (Duffy and Ask 2001).

- **Change should be gradual and informed**
  The implementation procedure is a highly individualised process since not one organisation is identical to the other and is dependent upon how work is organised, available resources and dependent on how supportive or hostile

the climate is, clearly the more support a policy has the easier and effective will the implementation be (Duffy and Ask 2001). In order to create a supportive environment it is vital to conduct a gradual and informed introduction to the suggested changes (Sacks-Silver, O'Loughlin et al. 1990). Change that is imposed either too quickly or not adjusted to the culture of the organisation is likely to create significant resistance, sometimes to the point of causing the entire policy program to fail (Lockwood and Saunders 1993; Duffy and Ask 2001).

- **Transparency**

  Another way of creating support for a policy is to keep the entire policy procedure, from development through implementation, highly transparent. This is best done by providing ongoing communication with employees on a regular basis ((Want 1993; Kaczmarczyk and Paul 1996). There is significant support for these types of strategies and by using multiple channels for communication increases the likelihood of success, but only if the message is appropriate and relevant to the target group (Kramar 1997).

- **Education and training**

  Particularly two strategies have been found to promote policy compliance and effective implementation and they are the definition of roles and responsibilities and education and training. By clearly defining roles and responsibilities in relation to compliance and delineate responsibilities for both managers and employees in regards to alcohol use in the organisation and how to create a safety conscious culture. In addition, managers and supervisors need to be given information on how to monitor work performance. Information regarding roles and responsibilities needs to be dispersed to everyone in the organisation on a regular basis, and particularly during induction of new employees (Duffy and Ask 2001).

  Education and training also ads to policy compliance by providing information about the effects of alcohol use on the individual and how it can affect work performance and workplace safety. In addition, education and

training need to include how to approach individuals that are under the suspicion of having alcohol related problems (Duffy and Ask 2001).

- **Evaluate the implementation process**

  An often overlooked component of a policy program is the evaluation component but it is important to keep in mind that evaluation is a key component of quality practice. The evaluation of a policy serves three purposes:

  - It tests to what degree the policy meets its objectives
  - It holds the organisation and management accountable
  - It provides important information to whether the policy needs amendments to become or stay successful (Bridgman and Davis 1998).

  Since a best practice policy should be targeting the entire organisation evaluation can give an indication to what extent this is the case and whether the policy content is well known to the entire employee group, including management and sub-contractors. It is also important to evaluate the effectiveness of the support functions, i.e., treatment programs and interventions, since the main objective of an effective policy is to minimise alcohol related harm and not to dismiss employees with alcohol related issues (Duffy and Ask 2001).

5.1.3.1 Survey content

There are a number of variables to take into account when attempting to implement a policy aimed at preventing alcohol related harm in the workplace. When an organisation decides to develop a policy, whether it is on alcohol, drugs or occupational health and safety, it is usual to state what acceptable practice within that particular workplace is.

When stating what acceptable practice in an organisation is, the organisation also implicitly puts up goals which all men and women in the organisation have to reach. For example, with respect to alcohol use, an organisation could state in its policy

that while an employee is at a dinner representing the company, it is acceptable to have only one glass of wine or beer, while on other occasions there is a zero acceptance for alcohol. In either case the organisation is trying to say “we do this in order to achieve that”, which in turn will generally result in attempts to change people’s behaviour in a particular direction, in order to correspond with the organisation’s policy.

From a methodological point of view, this is a simple relationship, between the policy and expected of behaviour. What complicates matters is that in real life this relationship is rarely this straight forward. There are often a number of so called “intervening variables” that in some way or another affect the relationship between the policy and desired behaviour or change of behaviour. When this happens, the end result may differ from the initial expected and/or desired outcome.

The following sections provide a description and analysis of the important variables needed for implementation of policies based on good practice aimed at preventing alcohol related harm in the workplace. Provided is a description of the intervening variables, what effect they may have on the outcome of prevention programs and what countermeasures can be taken to curb their effects. The variables discussed were derived out of the first two phases of this study namely data from the critical literature review and opinion of leading experts.

A logical way to approach a discussion about variables, or various factors, is to begin with discussing the desired end result which in this case was a policy to prevent alcohol related harm in the workplace.

There were 98 factors extracted from the Phase 2 interviews with leading experts on alcohol related harm that became the base from which the content of the phase 3 questionnaire was developed. The extraction of the 98 factors was done using text analysis with the focus to extract key words encompassing the main scope of the comment left by the respondents. Investigating the responses given by the key experts revealed 98 separate sentences. These sentences were, after analysis of

their content, organised into 11 different categories. The 11 different categories are as follows further below. Based on the results from the literature review and results from the experts survey, the model was then tested in the field to ascertain to what extent the below mentioned areas actually were implemented in the workplaces.

The topics investigated in phase 3 covered the following areas:

1. Background characteristics of the organisation, that is:
    a. Number of employees
    b. Type of industry
    c. Gender distribution
    d. Main reason for implementing an alcohol policy
    e. Time the current policy had been in place
2. Consultation/inclusiveness
3. Universal application
4. Organisation specific
5. Comprehensive
6. Instructions and procedures for responding to drug related incidents
7. Drug testing
8. Change should be gradual and informed
9. Transparency
10. Education and training
11. Evaluation

In addition men and women in management positions were also asked to identify obstacles and facilitators for the implementation of the current prevention of alcohol related harm policy in the workplace. The goal of the data collection was to find out the factors that managers and employees considered to be the most important when working to prevent alcohol related harm.

As mentioned previously, the questionnaire was divided into ten sections plus a section on background characteristics of the organisation. The responses to the

questions were, with exception for the open ended responses, on a Lickert like scale with four choices, and the option of 'Don't know'. Since questions had to be asked in a certain way it was impossible to have the exact same choices of response for each question. However, negative responses were consistently on the left hand side of the mean and positive responses on the right hand side.

5.1.3.1.1 Section 1: Background information on organisations

In order to understand what was investigated it was vital to have some background information on each participant and the organisation they worked for.

a. Number of employees

Requesting the number of employees in a particular organisation was done to determine whether an organisation was large, medium or small size as this in turn gave an indication of the resources the organisation could muster when attempting to implement a policy.

b. Type of industry

Research has indicated that some organisations might have a higher prevalence of alcohol use than other types of organisations therefore this was deemed as a necessary question.

c. Gender distribution

The critical literature review indicated that gender distribution could affect both drinking patterns as well as the level of alcohol used in an organisation.

d. Main reason for implementing an alcohol policy

The literature review has indicated that most studies did not investigate the main reasons why organisations implement an alcohol policy. It was therefore decided to include this question to address the obvious lack of data in this area. This question also had the potential to identify facilitators that may assist in the implementation of policies in other organisations.

e. Time the current policy had been in place

The time a policy had been in place was determined as an important question since length of time may affect the maturity of the policy. It was also an indicator of whether a policy was due or overdue for an evaluation and of how well known the policy was among employees. Furthermore, this question was also an important indicator of whether there was a difference in knowledge between employees of companies who implemented their policy recently versus those who were in organisations with an older policy.

5.1.3.1.2 Factors of best practice

In the following we will briefly recap the components of best practice, whose definitions can be found in chapter 2 page 32-36. These same components were then utilised as the foundation of the workplace questionnaire.

5.1.3.1.2.1 Consultation/Inclusiveness

Based on the findings from the expert survey and the critical literature review findings indicated that participation potentially was an important factor for best practice when developing and implementing a policy. It was therefore determined important to investigate to what extent both managers and employees had participated in the development and implementation of the organisations current alcohol policy. In addition the person in management position was also asked to indicate to what extent the employee group had been actively involved in the development of the policy, this was then compared with the employees' responses regarding their participation.

5.1.3.1.2.2 Universal application

Those in management positions as well as the employees were asked to what extent the current policy was aimed at everyone in the organisation or, if that was not the case, which groups the policy was particularly aimed at.

5.1.3.1.2.3 Organisation specific

A vital part of good practice is how well integrated the policy to prevent alcohol related harm is in the everyday life of an organisation. Both groups (management and employees) were asked to indicate to what extent the current policy was an integrated part of everyday life and to what extent the policy was adopted to their organisation's unique conditions.

5.1.3.1.2.4 Comprehensive

As indicated by results of the critical literature review as well as by the findings from the key expert survey comprehensiveness was emphasised as a vital component of best practice. The workplace participants was therefore asked whether the current alcohol policy was part of the organisations broader occupational health and safety programs and whether the policy was an integrated component in the promotion of healthier lifestyles.

5.1.3.1.2.5 Instructions and procedures for responding to drug related incidents

Having knowledge about the aim of a policy may differ quite significantly from having knowledge about the content of a prevention of alcohol related harm policy in the workplace. The participants were therefore asked a number of questions related to various items that should be an integral part of a policy such as knowledge of disciplinary actions when the policy is broken.

5.1.3.1.2.6 Drug testing

As one of the ingredients in Duffy and Ask's model of policy development emphasises the existence of drug testing procedures thus the participants in this study were asked to provide information about the existence of drug testing, the procedures and the legal implications associated with drug testing.

5.1.3.1.2.7 Change should be gradual and informed

As a way of reducing resistance for new policies and practices it has been determined, through empirical evidence, that changed should be conducted in a gradual and informed manner. The participating employers and employees were

therefore asked whether they had received information about the aims and purpose of the policy throughout the planning and implementation phase of their alcohol policy.

5.1.3.1.2.8 Transparency

In order for a policy to be effective it is of utmost importance that it has strong support from management and employees, a way of achieving strong support is to keep the entire process from planning to implementation as transparent as possible. To examine this point, both management and employees were asked whether they felt that the policy had strong support from management, the employee group and the union. In addition the person in the management position was also asked to indicate the level of support from senior management.

5.1.3.1.2.9 Education and training

Training and education regarding policy aim and content are vital components of good practice during attempts to implement a prevention strategy. Therefore each participant was asked to indicate how much training they had received, and whether their knowledge about the policy and its content had increased as a result of the information they had received. In addition, management and employees were also asked to indicate whether their knowledge had changed compared to prior to when they received the information. Training and education regarding policy aim and content are vital components of good practice during attempts to implement a prevention strategy. Therefore each participant was asked to indicate how much training they had received, and whether their knowledge about the policy and its content had increased as a result of the information they had received. In addition, management and employees were also asked to indicate whether their knowledge had changed compared to prior to when they received the information.

5.1.3.1.2.10 Evaluation

An often forgotten component of most policy programs is the evaluation phase. In order to determine how frequently policies were evaluated among the participating

organisations, the men and women in management were asked how often the policy had been evaluated. In addition they were also asked to indicate whether the employee group was consulted as a component of the evaluation process.

5.2 Questionnaire administration

The newly completed questionnaire was pilot tested on a group of managers and employees of similar characteristics to the study group in order to get feedback on the questionnaire. The group consisted of 10 men and women in managerial and employee positions, representing both private companies and government agencies in Sweden. Each participant was asked to complete the questionnaire and to record the time it took to complete it in entirety. Respondents were then asked to indicate whether they thought the questions were clear: the participants were asked to read each question in order to see whether the questions were unambiguous in character and that the questions were easy to understand. They were also asked whether it took too long to complete the questionnaire (ie to ascertain likely completion rates in the main study).

Based on the feedback from the focus group, only minor alterations of questions were carried out, namely the wording of some questions was changed to avoid misunderstandings and to make the question unambiguous in character.

Considering that all Swedish white-collar organisations which were selected to participate in the study had access to internet and e-mail, it was decided to develop a user-friendly, Windows based questionnaire. In the design of the questionnaire special care was taken to adjust to various level of computer knowledge and the usability of the questionnaire became a vital point. The electronic version of the questionnaire was tested for ease of use and platform and software version compatibility before the mass send out to participating organisations. Furthermore, several organisations were contacted to explore their views on computer based questionnaires and the ability to complete such a questionnaire. However it is important to note that computer knowledge among Swedish white-collar organisations overall is relatively well developed among both men and women.

Developing a Windows based questionnaire served multiple purposes. Firstly, it helped maintain the participant's confidentiality by making it possible for the participants to complete the questions in private, on their own computers. Secondly, it made it easier for the participant to complete the questionnaire at a time convenient for him or her. Thirdly, the electronic questionnaire was a cost effective way of solving the transfer of questionnaires between Sweden and Australia. In addition to these benefits the environmental impact was minimised since the use of an electronic questionnaire significantly decreased the use of paper copies and the need for envelopes.

The final version of the questionnaire was distributed to 250 men and women in 41 white-collar organisations around Sweden. Attached to the questionnaire was a detailed information sheet describing the purpose of the study, how to complete the form and return it to the researcher (Appendices 4, 8). Before receiving the questionnaire, each organisation was given a detailed description of the purpose of the study, its design, and the number of participants required and from what positions. All participants were also informed on the measures taken to safeguard the confidentiality of each person. The manager's questionnaire is located in Appendix 10/11 (English /Swedish versions) and the employees' questionnaire is in Appendix 12/13 (English/Swedish version). In addition to inform about the arrangement the confidentiality of the participant each individual was also informed that by completing the questionnaire they gave their informed consent to participate in the study. The consent form is available in Appendix 3.

5.3 Analysis

Similar to analysis carried out for Phase 2: Interviews with key experts, the methodology for this phase also used text analysis for the qualitative data and SPSS software package for the quantitative data.

The questionnaire for Phase 3 was a combination of questions with fixed response alternatives on a Lickert-like scale, and open ended questions. To keep track of

incoming responses, a procedure for logging information was developed using an SPSS database. During this data logging process, random questionnaires were double checked for correct entry of data into the database. Simultaneous with the construction of the platform for the database, a codebook was created to describe the data and to indicate where and how it could be accessed. This codebook was then used during the data entry process and throughout the data analysis phase. The codebook included the following items for each variable logged: variable name, variable description, variable format (number, data, or text), instrument/method of data collection, date collected, respondent or group variable location in the database.

Data was entered into computerised software package SPSS, version 14. Answers left blank by respondents were treated as missing values and as such deemed to be a no response item. 'Don't know' answers on the other hand were treated as valid responses rather than as missing values.

The descriptive statistics for Phase 3 consisted of frequency measures and percentage comparisons on each item across all the questionnaires. This was carried out in order for the researcher to obtain an indication on the outcome of each item in the study.

A McNemar-Bowker test was performed in order to determine the significance between before and after event, as for example "participated in the development of the alcohol policy" and "level of support for the policy". This test can be used on both nominal and ordinal data and can be used to test the impact of various events (Siegel 1956).

Due to the lack of normal distribution of the collected data it was determined that non-parametric tests would be the most adequate analysis to perform on the manager/employee survey. Siegel stated that non-parametric tests *"are often called "distribution-free", one of their primary merits being that they do not assume that*

the scores under analysis were drawn from a population distributed in a certain way." (Siegel 1956).

Since the data collected in the survey was ordinal data a Mann-Whitney *U* Test were performed to determine if there were a difference between managers and employees in the way they responded to the questionnaire. If normal distribution had been achieved then a *t*-test could have been performed but since no normality in the distribution was present a Mann-Whitney *U* test was determined to be the more suitable choice, since it is the nonparametric equivalent to a *t*-test.

The final step in the data analysis process was the development of a ranked list of items considered to be vital components of good practice with regards to prevention of alcohol related harm in the workplace. Furthermore, a detailed list of facilitators and obstacles to best practice and to implementation of prevention of alcohol related harm policies was drawn up based on the findings of the study.

5.4 Results

Due to the sensitive nature of the topic investigated, and due to the protocol needed to be followed by the researcher, Alna Riks had to be involved in the recruitment of organisations for this study. In the beginning of the study, the Alna Riks Offices were informed that in total 100 organisations needed to be recruited. However, the final list provided by them had only 69 organisations and a contact person within each organisation. The office from Östersund provided the majority of organisations (approximately 75 percent) whilst the Stockholm Office provided few names, even after repeated contact and urging from the researcher. Furthermore, when the researcher contacted the organisations directly some unexpected issues surfaced. Firstly, several of the contact e-mail addresses provided by Alna Council to the researcher were incorrect or non-existent. Secondly, a further number of organisations, when approached by the researcher, claimed that they had never been contacted by Alna Council regarding participation in the study nor had they consented to participate, whilst others claimed that they had been informed of the study but had not been asked for their commitment to the study. After excluding the organisations whose contact information was

incorrect, as well as those that had not been informed of the study and had not consented to participate, the researcher was left with a list of only 43 companies who were willing to participate in the study. In the end, the questionnaire aimed at managers and employees in both the private and public sector was sent out to only 258 people.

One hundred and ten questionnaires were completed and sent back to the researcher, giving a response rate of 42.6 percent. This low response rate may have been related to:

1. The sensitive nature of the topic of alcohol use in the workplace.
2. The fear of negative consequences stemming from one's own alcohol use
3. The organisations' desire to not be associated with alcohol use in their workplace.
4. The questionnaire having focused solely on alcohol and work, and was not part of a larger health promotion study which can result in a higher response rate.
5. The fact that recruitment of organisations was not carried out adequately and as planned, as some companies were not informed about the study at all, others were not asked for permission to participate and a further number of organisation were informed of the study but were not asked to commit to participation.

This low response rate also means that caution has to be exercised in interpreting data and a number of intended analyses were not possible. Of the completed questionnaires 20.9 percent (*N*=23) were completed by managers and 79.1 percent (*N*=87) by employees.

5.4.1 Number of employees

The number of employees in the participating organisations varied between seven and 11 000, with an average number of 876 employees. Due to the low response rate, and the fact that only one organisation had less than 15 employees, responses from that one particular organisation were also included in the total sample group.

Approximately 21 percent of the 110 participants were managers and 79 percent employees, see Table 5.1.

Table 5.1: Distribution of participants

	Frequency	Percent
Manager Questionnaire	23	20.9
Employee Questionnaire	87	79.1
Total	110	100.0

5.4.2 Type of industry

The types of industries participating in this study were white-collar industries (or white-collar sections) from a variety of branches. Participating organisations represented a relatively wide variety of industries from both private organisations and government agencies. Table 7.2 below provides a list of the various organisations that participated in the study.

Table 5.2: Number and type of organisations

Manufacturing industries (1)
Government agencies (3)
Media (1)
Financial Institutions (3)
Service providers (12)
Education provider (2)
Healthcare provider (1)

5.4.3 Gender distribution

The gender distribution within the participating organisations indicated that there was a small majority of women at 57.3 percent (N=63) versus 42.7 percent (N=47) men. The disparity could be explained by the fact that the participating organisations were white-collar organisations such as municipality agencies, service industries, newspapers, magazines and other service industries which tend to have more female employees.

Table 5.3: Gender distribution (General)		
	Frequency	**Percent**
Man	47	42.7
Woman	63	57.3
Total	110	100.0

When investigating the gender distribution among managers in the twenty-three participating organisations it was found that the majority (60.9 percent N=14) were men and 39.1 percent (N=9) were women. The small sample size of managers dictates cautious interpretation of these data. Table 5.3 summarises the gender distribution of this study and Table 5.4 shows the same among managers.

Table 5.4: Gender distribution (Mangers)		
	Frequency	**Percent**
Men	14	60.9
Women	9	39.1
Total	23	100.0

5.4.4 Main reason for implementing an alcohol policy

The managers were asked to identify the main reason why their organisation decided to develop and implement a prevention policy and their comments are summarised in Table 5.5. One of the reasons why this question was of particular interest was the desire to investigate whether the employers' decision to invest in a policy was a reactive or proactive decision. A reactive decision means that the employer invests in a policy in response to a critical incident, such as after an accident or another key incident has occurred. A proactive decision is made because the employer identifies risk factors in the work environment that could lead to excessive alcohol use or related harm. Another reason for a proactive decision could be that the organisation is implementing a healthier workplace policy in which an alcohol policy is an active component.

Table 5.5: Main reasons for organisations to implement a policy aimed at preventing alcohol related harm in the workplace	
No	**Summary of reasons given by manager (number of respondents, if more than one)**
1	Prevention of ill health and absenteeism due to ill health and promotion of employee health by creating awareness about unhealthy alcohol use (7)
2	To provide support for management and employees, create awareness that alcohol at work is not acceptable and to clarify the organisation's policy and code of conduct with regards to these issues (6)
3.	To help people with alcohol dependence
4.	To prevent accidents and improve the work environment (2)
5.	Company has special focus on these issues due to internal problems with alcohol
6.	Employer's initiative for security reasons (2)
7.	Organisation is conducting systematic work environment prevention.
8.	To create a sounding board between management and employees

As seen from the table above there was a wide variety of reasons why organisations decided to implement an alcohol policy. Some organisations developed policies as a reactive response to problems in the organisation, some developed a policy to make a clear statement of what is acceptable behaviour while others use a policy as one step to improve employee health. However, the two main reasons for implementing a policy were prevention and improvement of employee health (7 responses) and to send a clear statement of the organisation's standpoint on alcohol in association with work (6 responses).

5.4.5 Time current policy had been in place

When investigating how long policies had been in place, the responses indicated a very wide spectrum. The shortest time that a policy had been in place was two months, whilst the longest was sixteen years. The average time an alcohol policy had been in place in the study population was eight years and three months.

However, the length of time that policies had been in place did not distinguish whether the policies were active or not. In other words, was the policy an active instrument which was used by employers and employees alike to promote abstinence of non-harmful use of alcohol or not? The researcher examined other

indicators to determine how active a company's current alcohol policy was. In this study the following indicators were included as a way of determining activity levels.

Awareness of policy and its content as a measure of active policy:

The policy is:

- Aimed at everyone
- An integrated part of everyday life
- Adapted to the characteristics of a particular workplace
- Adapted to the organisation's everyday life
- An integrated component in the organisation's occupational health and safety program.

It is important to keep in mind that the time a policy has been in place can have influence in two ways. A well-established policy which has been in place for a number of years has the potential to be well accepted and part of the everyday life of an organisation. Therefore, it could be argued that it would be more likely that everyone in the organisation knows about it and complies with the policy. On the other hand, the longer a policy is in place the greater the risk of the policy becoming obsolete and losing its focus. If this happens, the risk is that the policy becomes forgotten, loses its function and becomes a paper that sits in a folder in an office somewhere.

A recently introduced policy would probably be well known, if everyone affected by it has received adequate information and training. On the other hand, if the introduction and implementation has been haphazard then there is the risk of resistance among employees and unions towards the policy and as such it might be less well known as well as less effective.

In summary, it seems that the quality of the implementation, information and training as well as how often a policy is evaluated and kept up to date are all important factors, and these are discussed later in this chapter.

5.4.6 Consultation/Inclusive

As mentioned in the critical literature review, participation of those affected in the development of a policy was essential to maximise successful implementation, and this is also an important component of good practice. Investigation of the extent any respondent had been involved in the development of their organisation's alcohol policy showed that the majority had not been involved at all, see Table 5.6.

Table 5.6: The extent of all the respondents' involvement in the development of their current alcohol policy

Response	Frequency	Percentage
Don't know	1	.9
Not at all	64	58.2
To a less extent	7	6.4
Partly	11	10.0
To some extent	8	7.3
To a significant extent	19	17.3
Total	109	100.0
Missing	1	.9
Total	110	100.0

As many as 58.2 percent (N=64) of all respondents indicated that they had not been involved in the development of their organisation's alcohol policy at all, and only 17.3 percent (N=19) of the respondents reported that they had been involved to a significant extent.

When the managers currently in charge of the organisation's alcohol policy were asked to what extent they had been involved in the development of the present alcohol policy, 43.5 percent (N=10) reported that they had been involved to a significant extent, see Table 5.7 below. A further 21.7 percent (N=5) reported that they had been involved in part and 17.4 percent (N=4) reported that they had been involved in the development of the current alcohol policy 'to some extent'.

When asking this type of question it is important to keep in mind that the responses given by the participants can be affected by the time he or she has been working in

the organisation. It is quite possible that a respondent was not employed, or had just begun their employment, when the policy was introduced. As such, they would have been involved in the development of the policy to a lesser extent, or not at all, and these results need to be interpreted cautiously. However, as the results indicate, over 80 percent of the managers responded that they had been involved, or significantly involved, in the development of their company's current alcohol policy. Mangers that completed the questionnaire were those who at the time of the study were in charge of the organisation's alcohol policy and they were not necessarily the same people who were involved in the development of the current alcohol policy. As such, this would be a strong indicator that the managers that participated in the survey to a great extent were the same managers who had been part of the development of the existing policy. Examining the extent to which employee groups were actively involved in the development of a current alcohol policy, see Table 5.7, it was found that 28.2 percent (N=31) were unsure if they had participated in the development. A further 20.0 percent (N=22) reported that they had taken part in the development of the alcohol policy 'to some extent'.

Table 5.7: The extent of mangers' and general employees' involvement in the development of their current alcohol policy

Response	Managers		Employees	
	Frequency	Percentage	Frequency	Percentage
Don't know	3	13.1	31	28.2
Not at all	1	4.3	17	15.5
To a less extent	0	0	12	10.9
Partly	5	21.7	14	12.7
To some extent	4	17.4	22	20.0
To a significant extent	10	43.5	12	10.9
Total	23	100.0	108	98.2
Missing	0	0	2	1.8
Total	23	100.0	110	100.0

As with the management group discussed earlier, caution has to be exercised when interpreting results from the employee group, because employees may or may not have been employed at the time of the introduction/development of the alcohol policy. However, results indicate that comparatively fewer employees reported

involvement in the development of their workplace alcohol policy compared to managers. This could be a result of a non-representative sample of employees, but it is impossible to determine if that has been the case in this study. It is possible that employees were involved in the development of the organisation's current alcohol policy, but not the particular individuals that completed this questionnaire. Another explanation, especially if the policy had been in place for a long time, could be that the employees who participated in the development wer no longer working in the organisation. This point is supported by the fact that over 28 percent did not know if the employee group had participated in the policy development, and thus it is possible that those who participated in this study were not present when the policy was developed. On the other hand it could also be, as results indicate, that employees were actively involved in the development process of the organisation's current alcohol policy to a much lesser extent when compared to managers.

5.4.7 Universal Application

When asked whether the alcohol policy was aimed at everyone working in the organisation, 93.6 percent (N=103) reported that they agreed or totally agreed that it was aimed at everyone (20.0 percent (N=22) and 73.6 percent (N=81) respectively), see Table 5.8. From the point of view of good practice this is a very promising result since previous research has also pointed out the importance of having an overarching policy aimed at everyone and not at one or two particular groups. This is essential as it doesn't label a particular group of people as "problem" employees and protects individual integrity, whilst the universal approach also assists in the implementation of the policy and increases the likelihood of developing a successful policy.

Table 5.8: The policy is aimed at everyone working in the organisation		
	Frequency	**Percent**
Don't know	3	2.7
Disagree	1	.9
Neither agree or disagree	3	2.7
Agree	22	20.0
Totally agree	81	73.6
Total	110	100.0
Missing	0	0
Total	110	100.0

In order to determine best practice to prevent alcohol related harm in the workplace, it is essential to investigate the content of alcohol policies used in various organisations. Therefore, several questions were included in the questionnaire regarding policy content, see table 5.9.

Table 5.9: Policy contents and dissemination to new employees		
Response	**Policy states that every new employee shall receive information about its content**	
	Frequency	**Percentage**
Don't know	10	9.1
Totally disagree	3	2.7
Disagree	18	16.4
Neither agree or disagree	11	10.0
Agree	33	30.0
Totally agree	33	30.0
Total	108	98.2
Missing	2	1.8
Total	110	100.0

When asked whether their alcohol policy contained a statement requiring all new employees to receive information about the organisation's alcohol policy content, 60 percent (N=66) agreed or totally agreed that their policy had that statement. These results indicate that there is definitely room for some improvement when it comes to designing and informing about the content of the policy. It is possible that

this could be a result of lack of clarity when it comes to policy content or a lack of information about the content of the policy.

5.4.8 Organisation Specific

As indicated in the literature review, an important feature of successful policies has been argued to be that they are designed with a specific organisation in mind and the policy needs to be well integrated into everyday life of the organisation.. To investigate how well integrated the policy was, participants in the study were asked a number of questions which focused on the content and integration of their organisation's alcohol policy.

On the question of whether the policy was an integrated component in the everyday life of the workplace, 62.8 percent (N=69) agreed or totally agreed that the policy was integrated into everyday life (36.4 percent (N=40) and 26.4 percent (N=29) respectively). Only 20.9 percent (N=23) neither agreed nor disagreed that the alcohol policy was an integrated component of the organisation's everyday life, see Table 5.10.

Table 5.10: Level of integration and specificity of policy

Response	Policy integrated into everyday life of workplace		Policy designed to specific characteristics of workplace	
	Frequency	Percentage	Frequency	Percentage
Don't know	5	4.5	8	7.3
Totally disagree	3	2.7	2	1.8
Disagree	10	9.1	16	14.5
Neither agree or disagree	23	20.9	22	20.0
Agree	40	36.4	35	31.8
Totally agree	29	26.4	27	24.5
Total	110	100.0	110	100.0
Missing	0	0	0	0
Total	110	100.0	110	100.0

When asked whether the policy was designed to suit the specific characteristics of the respondents' workplace, 56.3 percent (N=62) reported that they agreed or totally agreed that this was so, see Table 5.10. Only 16.3 percent (N=18) felt that the policy was not adapted to the unique features of their workplace (by

responding either don't agree 14.5 percent (N=16) or totally disagree 1.8 percent N=2)). These results imply that the policy was developed in a way that takes into consideration the unique characteristics of the organisations.

In addition, indicative of the findings in the literature, to maximise the impact of a policy it has been found that it should be flexible and adaptive to changes in the way work is organised. A feature that has become even more important in a time when organisations, big and small, are looking at maximum flexibility in order to adjust to their customers' needs. When investigating how flexible the alcohol policy was in organisations, 42.7 percent (N=47) of the respondents either totally agreed or agreed that their policy was adaptable to changes. On the other hand, 28.2 percent (N=31) indicated that their organisation's alcohol policy was not well adapted to the way work was organised in their workplace, see Table 5.11.

There can be a number of conclusions to be drawn based on these results. In organisations where employees indicated that their policy was not well adapted to their way of organising work, it is possible that this was the result of too little input by employees during the design stages of the policy. This could then result in a policy not tailored to the specific conditions of a particular workplace which could limit its impact and in the end it could become more or less useless.

Table 5.11: The alcohol policy is well adapted to the way work is organised in the organisation

	Frequency	Percent
Don't know	14	12.7
Totally disagree	8	7.3
Disagree	23	20.9
Neither agree or disagree	17	15.5
Agree	37	33.6
Totally agree	10	9.1
Total	109	99.1
Missing	1	.9
Total	110	100.0

A Non-parametric Chi Square Test showed a significant correlation between the question *The alcohol policy is integrated into everyday life of this workplace* and *The alcohol policy is designed to the specific characteristics of this workplace* (χ^2 = 59.309, p<.000, df=5 versus χ^2 =40.655, p<.000, df=5) and CI95% (3.61±1.293) versus CI95% (3.41±1.423). This supports the notion of adapting a policy to the specific needs of a particular workplace and, secondly, that the policy is flexible enough to adjust to changes in the way work is organized, e.g. the level of order intake or production of new types of products and services that require adaptation.

Even though results of the previous two questions indicate that the alcohol policy in the participating organisations was well adapted to everyday life and to their particular characteristics, the organisations in this study were generally lacking with respect to adapting the policy to the way they organised their work. This raised the question of whether these findings were an indicator of changes that occurred in the past decade. It could be, since these days many companies have employees who work away from the office, either from home or on the road. This could cause problems with an alcohol policy since it is virtually impossible to monitor the individuals who are not working within the four walls of the organisation's main location.

5.4.9 Comprehensive

Findings in the literature review indicated a strong support for the notion that a policy aimed at preventing alcohol related harm should be comprehensive and not only focus on alcohol per se but on factors likely to influence patterns and levels of alcohol use. The participants were therefore asked several questions to determine whether the alcohol policy was treated as an exclusive policy, separate from any other occupational health and safety policy, and to unveil potential connections to other policies and the responses are summarised in Table 5.12.

When asked whether or not the alcohol policy was part of the organisation's overall occupational health and safety program, 78.2 percent (N=86) reported that the

policy was well integrated into their organisation's occupational health and safety program. Of this number, 40.0 percent (N=44) totally agreed and 38.2 percent (N=42) agreed with the above statement indicating that overall the alcohol policy was well integrated in the organisation's occupational health and safety program.

Table 5.12: Policy is part of occupational health and safety programs and promotes healthy lifestyle

Response	Policy part of organisation's overall occupational health and safety program		Policy is one step to promote healthy lifestyle in the workplace	
	Frequency	Percentage	Frequency	Percentage
Don't know	10	9.1	2	1.8
Totally disagree	1	.9	1	.9
Disagree	7	6.4	6	5.5
Neither agree or disagree	6	5.5	21	19.1
Agree	42	38.2	51	46.4
Totally agree	44	40.0	28	25.5
Total	110	100.0	109	99.1
Missing	0	0	1	.9
Total	110	100.0	110	100.0

The study also explored individual perception on whether participants could see the connection between alcohol use and health. To this end, participants were asked whether they felt that an alcohol policy was one method to promote a healthy lifestyle in the workplace. Results indicate that the majority, 71.9 percent (N=79), felt that an alcohol policy was one way to promote good health. These results indicate that overall the participating organisations were relatively good at implementing the alcohol policy in a way that promoted a healthier lifestyle among their employees.

In conclusion, the results to the questions in this section suggest that the participating organisations were reasonably effective at incorporating the alcohol policy into everyday life and linking it to a positive health development among their employees. It is only when it came to adjusting the policy to the way work is

organised that companies acted in contradiction to what the literature review and expert input suggested was quality practice.

Individual knowledge of an organisation's alcohol policy among employees and employers can be seen as one indicator of how active, or alive, a policy is. If policy issues are discussed on a regular basis and employers and employees are trained on alcohol related matters, the likelihood of having an active policy increases. Active policy work is also likely to demystify discussions about drinking habits and negative consequences related to excessive alcohol use.

5.4.10 Instructions and procedures for responding to drug related incidents

A policy without the power to enforce disciplinary action if and when someone breaks it stands the risk of being relatively useless. All participants were therefore asked whether their policy included a statement that the organisation could enforce disciplinary action and the responses are summarised in Table 5.13.

Table 5.13: The alcohol policy informs that the organisation can enforce disciplinary action if anyone breaches the policy

	Frequency	Percent
Don't know	6	5.5
Totally disagree	1	.9
Disagree	9	8.2
Neither agree or disagree	12	10.9
Agree	37	33.6
Totally agree	43	39.1
Total	108	98.2
Missing	2	1.8
Total	110	100.0

Results indicated that 72.7 percent (N=80) knew that their policy included such statements. It is promising that a relatively large proportion of the employees in the surveyed organisations indicated having knowledge about disciplinary action. This implies a high level of transparency in the policy, which in turn makes it relatively accessible to the majority of employees. Transparency of a policy is an important

component of an organisation's occupational health and safety program since it makes policies, including the alcohol policy, explicit to everyone affected by it.

However, a policy cannot be enforced using only threats of disciplinary action because such policies are likely to lose their support among employees and union representatives. It is important that organisations also support individuals who may experience some type of alcohol related problems, without victimising the individuals and turning this into a personal problem.

On the question of whether the policy informed employees that the organisation would support anyone experiencing problems, results indicate that the vast majority, 78.2 percent (N=86) were sure that this was included in the policy. The inclusion of this item as part of quality practice was supported both by the critical literature review as well as through the expert input..

Table 5.14: Policy content on options available in case an employee experiences alcohol related problems

Response	Policy informs that organisation provides support for employees with alcohol related problems		Policy informs of what to do if a colleague is suspected of experiencing alcohol related problems	
	Frequency	Percentage	Frequency	Percentage
Don't know	5	4.5	4	3.6
Disagree	6	5.5	6	5.5
Neither agree or disagree	12	10.9	8	7.3
Agree	39	35.5	42	38.2
Totally agree	47	42.7	47	42.7
Total	109	99.1	107	97.3
Missing	1	.9	3	2.7
Total	110	100.0	110	100.0

When asked whether the alcohol policy provided information on what to do when suspecting a colleague of experiencing alcohol related problems, the majority of respondents knew that such a statement was included in their organisation's policy,

see Table 5.14. Of the respondents, 42.7 percent (N=47) totally agreed and 38.2 percent (N=42) agreed that such a statement was included in their alcohol policy.

5.4.11 Drug Testing

Another component of prevention of alcohol related harm policies is testing for alcohol in the workplace, for example randomly or when an individual is suspected of being under the influence of alcohol.

For organisations in this study, random testing was not part of their alcohol policy, with the majority of respondents (over 80 percent (N=89)), indicating that random testing for alcohol at work was not a component of their organisation's alcohol policy.

When asked whether their particular policy provided information on when alcohol testing would be appropriate, 46.4 percent (N=51) of the respondents indicated that the policy did provide such information, see Table 7.15. But interestingly, 33.7 percent (N=37) of the respondents indicated that their policy did not have a clear statement of when alcohol testing would be appropriate. This result created a number of questions. Since this was a cumulative result for 23 different organisations it could be possible that the mix of workplaces contributed to this result, but after controlling for separate organisations this was not the case. The disparity in responses was still there within single organisations, which suggests that respondents from the same organisations were confused or had very different views on the content of the policy. This could mean that either the policy was flawed and confusing to employees or the training or information/communication was inadequate and inappropriate.

However when managers and employees were asked whether the current alcohol policy included testing for alcohol when someone was under the suspicion of being intoxicated, 55.4 percent (N=61) either agreed or totally agreed that the policy included such information, see table 5.15. On the other hand, 20 percent (N=22)

indicated that their policy did not include testing if someone was under the suspicion of being intoxicated.

Table 5.15: Alcohol testing				
Response	**Policy informs when alcohol testing is appropriate**		**Current policy includes testing for alcohol when someone is under suspicion of being intoxicated**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Don't know	7	6.4	9	8.2
Totally disagree	19	17.3	10	9.1
Disagree	18	16.4	12	10.9
Neither agree or disagree	13	11.8	15	13.6
Agree	28	25.5	24	21.8
Totally agree	23	20.9	37	33.6
Total	108	98.2	107	97.3
Missing	2	.9	3	2.7
Total	110	100.0	110	100.0

As mentioned earlier, the vast majority of the participants indicated that random testing for alcohol was not a component of the current policies. This however does not entirely exclude the presence of alcohol testing in the available policies. In Table 5.15, over 46 percent indicated that the alcohol policies included information on when alcohol testing was appropriate. This would implicitly indicate the presence of alcohol testing, but not random testing. What further strengthens that indication were the results shown in Table 5.15 where over 55 percent responded that there was testing for alcohol when there was suspicion that someone might be intoxicated at work. So the conclusion from this section is that many of the available policies have alcohol testing as an active component but that random testing is not part of the policy. One possible explanation as to why random testing was not part of the participating organisations' policies could be that random testing has been viewed as relatively intrusive and something that may harm personal integrity. On the other hand, this is not a unified view as there are those who believe that

random testing is less intrusive since it targets the whole workforce, not any particular individual. Testing when there is a suspicion of intoxication by alcohol on the other hand seems more acceptable since this may be based on more factual evidence than randomly testing individuals, for example there may be an explicit risk of accidents and therefore it is acceptable to test an individual.

When asked whether the current alcohol policy included information regarding rules and regulations regarding alcohol testing, 54.6 percent (N=60) of the respondents either totally disagreed or disagreed that any such statement was in their organisations' policy, see Table 5.16. Approximately 21 percent (N=23) indicated that their policy had information regarding rules and regulations surrounding the procedures of alcohol testing.

Table 5.16: Policy regulations

Response	Policy informs about rules and regulations regarding alcohol testing	
	Frequency	Percentage
Don't know	16	14.5
Totally disagree	19	17.3
Disagree	41	37.3
Neither agree or disagree	10	9.1
Agree	14	12.7
Totally agree	9	8.2
Total	109	99.1
Missing	1	.9
Total	110	100.0

As has been mentioned previously, alcohol policies were sometimes viewed as intrusive and something that interfered with the private life of men and women, for example unions have been known to protest against alcohol policies. The results in Table 5.16 show that as many as 43.7 percent (N=48) either agreed or totally agreed with the statement that an alcohol policy was a way of supporting individual freedom. Only 11.8 percent (N=13) disagreed with that statement.

5.4.12 Change should be gradual and informed

When attempting to implement an alcohol policy to prevent alcohol related harm in the workplace there are a number of important factors to keep in mind, derived from the critical literature review. Firstly, all employees must be informed about the policy and its intentions and purposes, preferably during the development of the policy. This is vital in order to get support for the policy. Secondly, it is also vital to have the backing of senior management because without their support an alcohol policy is unlikely to be successfully developed and implemented.

As shown in table 5.17 below, 44.5 percent of the respondents (N=49) indicated that they had received information about the purpose of the policy, and when asked whether they had received information about the content of the policy over 58 percent (N=64) indicated that they had received such information. Once again, these figures could be considered low and a result of poor transfer of information. On the other hand it could also be seen as quite reasonable considering that the average time a policy had been in place was 8.3 years and not all participants surveyed were present when the policy was introduced. In support of the later point of view were the findings that more people received information about the content of the policy rather than of the actual purpose of the policy, something that may be more common during the introduction phase of policy implementation.

Table 5.17: All employees have been informed about the purpose of the policy before and during implementation

	Frequency	Percent
Don't know	16	14.5
Totally disagree	5	4.5
Disagree	16	14.5
Neither agree or disagree	23	20.9
Agree	22	20.0
Totally agree	27	24.5
Total	109	99.1
Missing	1	.9
Total	110	100.0

On the other hand, studying the results on the question whether all employees had received information about the content of the current policy (see Table 5.18) the results indicated that over 58 percent (N=64) either agreed or totally agreed to the fact that all employees had been informed. Only 12.8 percent (N=14) indicated that the employees had not been informed about the policy content.

Table 5.18: Policy contents and dissemination to new employees

Response	All employees have received information about the content of the policy	
	Frequency	Percentage
Don't know	12	10.9
Totally disagree	6	5.5
Disagree	8	7.3
Neither agree or disagree	18	16.4
Agree	33	30.0
Totally agree	31	28.2
Total	108	98.2
Missing	2	1.8
Total	110	100.0

5.4.13 Transparency

There was a relatively low level of support for the current alcohol policy from the employee group when compared to the support the policy received from senior management and the union. Only 40 percent (N=44) of employees supported the policy, compared to 72.5 percent (N=79) support from senior management and 69.1 percent (N=76) support from unions.

The conclusion one can draw from this is that the low participation rates among employees during the development phase are reflected in the relatively low support rates for the current alcohol policy. This result is consistent with what the evidence indicates is quality practice that advocates individual participation and a feeling of ownership of a policy as necessary components in order to ensure employee support for any workplace policy.

It seems reasonable that it would be easier to get participation from union representatives and senior management as they are much smaller groups and are much more involved in the development of a policy compared to the employee group. However, this does not imply that the employee group can or should be left out during policy development and implementation, since that will certainly result in less support for any policy introduced in the workplace.

When both managers and employees where asked whether all employees had a responsibility to support the organisation's alcohol policy 93.7 percent (N=103) of the respondents either agreed or totally agreed that they had that responsibility, see Table 5.19. This would indicate a strong social pressure to comply to the organisations policy on alcohol in or in association with work. Looking back at what was said earlier about workplace culture and permissiveness regarding alcohol at work, this would be a strong indicator that the participating organisations are characterised by a low acceptance towards alcohol use at work.

Table 5.19: Support for policy

Response	All employees have a responsibility to support the organisation's alcohol policy		There is strong employee support for the current alcohol policy	
	Frequency	Percentage	Frequency	Percentage
Don't know	3	2.7	29	26.3
Totally disagree	0	0	1	.9
Disagree	1	.9	6	5.5
Neither agree or disagree	2	1.8	28	25.5
Agree	40	36.4	31	28.2
Totally agree	63	57.3	13	11.8
Total	109	99.1	108	98.2
Missing	1	.9	2	1.8
Total	110	100.0	110	100.0

Results for this question indicated that 40 percent (N=44) of the participants either agreed or totally agreed that there was strong employee support for the current alcohol policy, see Table 5.19. Over 25 percent (N=28) indicated that they neither

agreed nor disagreed to the statement that there is strong support for the policy among the employees.

Considering that only 40 percent supported their current alcohol policy it was somewhat surprising to find that 93.7 percent of respondents indicated that it was the responsibility of all employees to support an organisation's alcohol policy. This creates some questions to reflect on:

1. Is the lack of support for the current alcohol policy a result of a general disapproval of its content? Or
2. Is the employee group's lack of support a result of a feeling of lack of ownership due to low involvement in the development process of the current alcohol policy?

The main reason why these questions arose was because there seems to be a strong feeling of loyalty and responsibility among employees to support the organisation's alcohol policy, but the support for the organisations' current alcohol policy was much lower.

A McNemar-Bowker Test on whether strong employee support CI95% (2.65±1.784) was related to level of employee group participation (CI95% (2.13±1.811) in the development of the current alcohol policy revealed that there was a relationship and a Chi Square test indicated the relationship was significant (χ^2 =25.467, p<0.044, df=15). This result makes sense as employee groups that participated in the development of the policy would then feel a strong sense of ownership towards it.

Investigating the support from senior management, see Table 5.20, results indicated that among the participating organisations there was strong support from senior management. Almost 72 percent (N=79) replied that they agreed or totally agreed that there was a strong support for the current alcohol policy, which is much higher than the employee group's responses.

Table 5.20: Support for policy from management and unions				
Response	**There is strong support from senior management for the current alcohol policy**		**There is strong union support for the current alcohol policy**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Don't know	15	13.6	24	21.8
Totally disagree	0	0	0	0
Disagree	0	0	1	.9
Neither agree or disagree	15	13.6	8	7.3
Agree	39	35.5	41	37.3
Totally agree	40	36.4	35	31.8
Total	109	99.1	109	99.1
Missing	1	.9	1	.9
Total	110	100,0	110	100.0

Similar support was found when investigating the union's support for the current alcohol policy, see Table 5.20, with as many as 69.1 percent (N=76) of the participants indicating that they agreed or totally agreed to the statement that there was a strong support from the unions.

What this strong support could indicate is either that the implementation process of the policy aimed at preventing alcohol related harm in the workplace was well integrated. On the other hand it could also be a reflection of the moral standpoint towards alcohol on the Swedish labour market.

An interesting observation was that the participants indicated that all employees have the responsibility to support the organisation's policy, with over 93 percent sharing that view. At the same time, only 40 percent indicated a strong support from the employee group towards their own organisation's alcohol policy. Among senior management the support for the policy, or at least the participant's perception of senior management's support, seemed to be very strong with 71.9 percent either agreed or totally agreed that there was a strong support from senior management. Similar figures were found when investigating union support for the current alcohol policy: approximately 69 percent of respondents had the perception that there was a strong union support for the policy. One question that has to be

asked is why is the perception that there was a weaker support for the current policy among the employee group at the same time as there was a very strong belief among the participants that it is the responsibility of all employees to support their organisations alcohol policy? Findings from the critical literature review related to social pressure could perhaps provide an answer to this dichotomy. It seems plausible that the common view was that it is important to support an alcohol policy if and when it exists in their current organisation since that would increase safety and promote health among employees. The strong belief that all employees should support a policy could therefore be explained by social pressure. The weaker support for their current policy could on the other hand be explained by poor policy design, that is, the policy has not stood up to the expectations of the employees in the sense that they were involved and therefore were less motivated to support their current policy.

5.4.14 Education and training

Important for the success of any policy, based on the findings in the literature related to quality practice, are adequate education and information about the aim of the policy, what it entails, clear definition of the target group and how it will affect those who work in the organisation. As part of the study, the amount of education received by managers and employees was investigated. However, it was considered vital to also research their knowledge about alcohol related harm prior to the education opportunity. The participants were therefore asked to estimate how good their knowledge was before they received the education and results are summarised in Table 5.21 below. It is acknowledged that such retrospective assessment carries substantial limitations and due caution should be exercised in interpretation.

Results indicate that over 78 percent (N=86) perceived their knowledge to be average to very good, while 16 percent (N=17) had limited to no knowledge at all. A possible explanation of the relatively high percentage of participants who indicated that their knowledge was average to good could be the growing debate about

alcohol and its potential consequences in working life that has been in the Swedish media.

Table 5.21: Extent of knowledge about alcohol related harm prior to education

	Frequency	Percent
Don't know	3	2.7
No knowledge at all	1	.9
Limited knowledge	16	14.5
Average	47	42.7
Good	30	27.3
Very good	9	8.2
Total	106	96.4
Missing	4	3.6
Total	110	100.0

The amount of training received is also vital information in order to determine the effort that the organisations have invested on education. Education can include everything from delivering a pamphlet about alcohol related harm and the potential consequences it can have for the organisation and the individual employees, to educational efforts carried out by professional trainers.

When asked how much training the participants received regarding alcohol related harm in the workplace, the responses indicated that they had received a limited amount of education with 43.6 percent (N= 59) having received very limited or limited education, see Table 5.22. An interesting finding was the fact that almost one quarter of men and women in the participating organisations stated that they had not received any education at all. This is a low response because even those who were not present when the policy was introduced should have, in accordance with good practice, received education at a later date. On the other hand it was possible that participants received education in other areas related to alcohol and work, for example, alcohol and health. Since this question specifically focused on training on alcohol related harm in the workplace, education on other areas related to alcohol and work may not have given a positive response to this question.

Table 5.22: Education received				
Response	**How much education was received regarding alcohol related harm in the workplace**		**How much education was received on effects of alcohol on work performance**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Don't know	1	.9	2	1.8
None	26	23.6	23	20.9
Very limited	15	13.6	9	8.2
Limited	44	40.0	41	37.3
Extensive	18	16.4	28	25.5
Very extensive	5	4.5	5	4.5
Total	109	99.1	108	98.2
Missing	1	.9	2	1.8
Total	110	100.0	110	100.0

In order to determine if participants in this study had received other types of education they were asked how much education they had received regarding alcohol and the potential effects it can have on work performance, see Table 5.18.

The results indicated that approximately 37 percent (N=41) received limited education, whilst only 25.5 percent (N=28) said the education they received was extensive. But there were still almost 21 percent (N=23) who responded that they had not received any education at all on the effects alcohol can have on their work performance.

Considering how many respondents had received no, or only a limited amount of, education on alcohol related harm or on the potential effects alcohol can have on the work performance, it is perhaps surprising, or contradictory, to find that over 57 percent indicated that their knowledge about alcohol related harm had increased a little or much, see Table 5.23. Seventeen percent on the other hand, indicated that the education had not changed their knowledge at all.

Table 5.23: Extent to which education increased knowledge about alcohol related harm in the workplace		
	Frequency	**Percent**
Don't know	8	7.3
Unchanged	19	17.3
Very little	7	6.4
A little	34	30.9
Much	29	26.4
Very much	7	6.4
Total	104	94.5
Missing	6	5.5
Total	110	100.0

To determine if an agreement occurred between the amount of education received regarding alcohol related harm and the self reported increase in knowledge on the subject, a McNemar-Bowker Test was carried out which showed that there was in fact a concordance between amount of education and reported increase in knowledge CI95% (2.61±1.178) and (CI95% (2.75±1.412). A Chi square test showed a significance (χ^2 =19.181, p< .024, df=9). However a Chi square test on education received regarding the effects of alcohol on work performance and the extent of increase in knowledge on the subject did not show a significant relationship.

Therefore, these results can be interpreted in three ways:

1) Those who indicated that their knowledge had increased, even though the numbers who claimed they had not received any education was fairly large, improved their knowledge as an effect of the general discussion that is likely to follow an introduction and implementation of an alcohol policy. Therefore it would seem possible that the impact of informal transfer of information could be fairly substantial.
2) There was a relatively large section of participants that indicated that the education did not change their knowledge at all. This could either mean that the education was of poor quality or it could be a reflection of an already good knowledge about alcohol related harm and the potential

effects alcohol can have on work performance and the education therefore had little additional impact

3) It could also be an artefact, for example if an individual believes that they had a good education they may also believe that they have good knowledge when in fact neither may be true. Given the design of the study with its reliance on retrospective self-report/subjective interpretation one cannot make any definitive conclusions.

When the results of the question on the impact of education on knowledge about alcohol related harm in the workplace were broken into manager versus employee groups, see Table 5.24, there were more managers than employees who claimed their knowledge had increased much (39.1 versus 23 percent) or very much (26.1 versus 1.2 percent). A possible explanation could be that managers were more involved in the development as well as the implementation work of the policy and therefore received more education regarding alcohol related harm in the workplace, which in turn would explain their proportional increase of knowledge on the topic. There may also be some reporting bias, in that managers may be more inclined to report positive outcomes of management strategies than employees.

Table 5.24: Managers vs. employees –Extent to which education increased knowledge about alcohol related harm in the workplace

	Managers		Employees	
	Frequency	**Percent**	**Frequency**	**Percent**
Don't know	0	0	8	9.2
Unchanged	3	13.0	16	18.4
Very little	0	0	7	8.0
A little	4	17.4	30	34.5
Much	9	39.1	20	23.0
Very much	6	26.1	1	1.2
Total	22	95.6	82	94.2
Missing	1	4.3	5	5.8
Total	23	100.0	87	100.0

Since the literature review demonstrated that higher educational level, which included health and lifestyle issues as well as alcohol correlated with levels of alcohol use (i.e., higher socioeconomic status is linked to higher prevalence of drinking), the researcher included several questions investigating the topic. The participants were asked to indicate how much education they received regarding lifestyle related issues, for example on the benefits of regular exercise and appropriate nutrition. Results, tabulated in Table 5.25 indicated that 60 percent (N=66) of the respondents had received limited to no education at all on these issues, whilst over 36 percent (N=40) said that they had received extensive or very extensive education.

Table 5.25: Extent of education received regarding lifestyle related issues (e.g., regular exercise, nutrition)

	Frequency	Percent
Don't know	2	1.8
None	14	12.7
Very limited	12	10.9
Limited	40	36.4
Extensive	30	27.3
Very extensive	10	9.1
Total	108	98.2
Missing	2	1.8
Total	110	100.0

When asked if the education on lifestyle related issues had increased the participant's knowledge in how to develop a healthy lifestyle, the majority responded that their knowledge had increased very much, much or a little, 2.7 percent (N=3), 25.5 percent (N=28) and 35.5 percent (N=39) respectively, while 18.2 percent (N=20) said that it had not changed at all.

In an attempt to examine whether there were any differences between managers and employees a cross tabulation was performed and the results, in Table 5.26, indicated a substantial increase in knowledge for managers on how to develop a healthy lifestyle compared to those in the employee group. Over 68 percent (N=15) of the managers responded that their knowledge had increased much or very much,

compared to the employee group where only 19.1 percent (N=16) indicated similar improvement in knowledge.

Table 5.26: Managers vs. employees - To what extent has the education increased knowledge regarding how to develop a healthy lifestyle

	Managers		Employees	
	Frequency	**Percent**	**Frequency**	**Percent**
Don't know	0	.0	10	11.9
Unchanged	4	18.2	15	17.9
Very little	0	.0	6	7.1
Little	3	13.6	36	42.9
Much	13	59.1	15	17.9
Very much	2	9.1	1	1.2
Total	22	95.6	84	96.6
Missing	1	4.4	3	3.4
Total	23	100.0	87	100.0

The conclusion to be drawn from this result is that whilst formal education on the subject was limited, respondents seemed to get information in other ways with the same outcome, namely that their knowledge about alcohol related harm, its effects on work performance and how to develop a healthy lifestyle increased. It is quite possible that the participants in this study entered the organisations after the main educational component of the policy had been executed. However, through other means such as discussions with colleagues or education/information provided in the broad community, there may have been sufficient transfer of information regarding the issue to increase their knowledge to the level it was reported.

What Table 5.26 highlights is that those in management positions seem to have increased their knowledge to a greater extent compared to the employee group. There may be multiple explanations for this; firstly it is quite possible that the managers received more education than the employee group, perhaps because they were involved throughout the policy development process. Secondly, it is reasonable to assume that it might be easier to remove men and women in management positions for an education session than a large proportion of the

employee group. If employees leave for an extended education session it may cause major logistical, technical and safety problems since the remaining employees either have to cover for their colleagues or the business has to shut down for the duration of the training program.

Another component of successful education is how the educational material is designed, for example, were the instructions well balanced and provided information about the positive as well as negative aspects of alcohol consumption? When the men and women of this study responded to this question, a relatively large proportion, over 46 percent (N=51), indicated that they either agreed or totally agreed that the information was well balanced. Almost a quarter neither agreed nor disagreed (N=26), while the rest thought that the information was not well balanced. Therefore it seems likely that the information given during the education was perceived as well balanced in the sense that it provided information of both positive and negative character in relation to alcohol use and its potential harmful effects.

5.4.15 Evaluation

The most fundamental part of any policy is whether or not it is successful; otherwise there would be little point of having a policy. Managers were therefore asked whether they felt that their current alcohol policy had been successful, see Table 5.27.

Table 5.27: Our current alcohol policy has been successful		
	Managers	
	Frequency	Percent
Don't know	2	10
Totally disagree	0	0
Disagree	0	0
Neither agree or disagree	8	40
Agree	10	50
Totally agree	0	0
Total	20	85
Missing	3	15
Total	23	100.0

The results gave a very unclear picture with regards to whether the alcohol policy was perceived to be a success. Of the respondents, 43.5 percent (N=10) agreed that the policy was successful while 34.8 percent (N=8) neither agreed nor disagreed and an additional 13.1 percent (N= 3) reported that they did not know if the policy was a success.

Is it not possible to draw any definite conclusions on whether the alcohol policy in the investigated organisations was a success or not. Going solely on subjective judgment the answer is that the policies were generally not perceived as successful, however there were additional sources of information that provided further assistance in determining this. Firstly, and also associated with whether or not the policy was an active one, it was investigated whether the alcohol policy was frequently discussed in the workplace.

Results indicated that this was not the case with over 55 percent (N=61) responding that the policy was not regularly discussed in the workplace, only 9.1 percent (N=10) of the participants indicated that the policy was frequently discussed in their workplace. This could be interpreted in a variety of ways. Firstly, there is the possibility that the policy is highly inactive, and only stands on a shelf in some office, and as such not discussed. Secondly, the policy may be well integrated into a range of other workplace policies and therefore not discussed as an independent entity

but rather as part of professional conduct among employees, i.e. the policy could be so implicit in the work culture that it does not need to be discussed. For example, we do not regularly discuss the law regarding murder, but that does not mean that the law is not well communicated, understood and adhered to.

In an attempt to deepen the investigation on how often the policy was discussed in the workplace, the responses were sorted according to gender. The result in the Table 5.28 below indicated that women to a lesser extent than men discussed the organisation's alcohol policy, 51.2 percent (N=of the women and 57 percent of the men disagreed or totally disagreed with the statement that the policy was discussed in the workplace on a regular basis. However, the overall picture showed very little difference between men's and women's responses regarding the frequency of talking about the alcohol policy. This could be an expression of the taboos related to alcohol and work and the perception that alcohol is something private and therefore not discussed openly. It could also be an expression of the organisational climate in the participating organisations, that is, because of fear of being labelled as a problem organisation, alcohol policies are not discussed regularly. But, as mentioned previously, this could also be the result of a policy that is working well.

Table 5.28: Men versus women - The policy is discussed in the workplace on a regular basis

	Men		Women	
	Frequency	**Percent**	**Frequency**	**Percent**
Don't know	1	2.1	3	4.8
Totally disagree	6	12.8	7	11.1
Disagree	18	38.4	29	46.0
Neither agree or disagree	13	27.7	18	28.6
Agree	2	4.2	6	9.5
Totally agree	2	4.2	0	0
Total	42	89.4	63	100.0
Missing	5	10.6	0	0
Total	47	100.0	63	100.0

Another component of importance in the pursuit of quality practice, as indicated by the critical literature review, is communication of the policy with employees. This in turn is related to the association to the feeling of ownership of the policy, which

also can affect the support for the policy. This issue also gains importance when evaluating the effectiveness of the policy. When participants were asked whether the employee group was, as a part of the evaluation process, consulted regarding the alcohol policy 42.7 percent (N=47) either totally disagreed or disagreed that this was so. Over a quarter of the respondents said that they neither agreed nor disagreed with this statement. Only 10.9 percent (N=12) indicated that the employee group was consulted as a way to evaluate the policy.

When managers were asked how often the policy was evaluated 35 percent (N=7) indicated that they either did not know how often it was evaluated or even if it was evaluated at all. Another 30 percent (N=6) indicated that it was evaluated every second year while an additional 35 percent (N=7) reported that the current alcohol policy was evaluated once a year.

Table 5.29: How often was the policy evaluated

	Managers	
	Frequency	**Percent**
Don't know	5	25
Never	2	10
Every second year	6	30
Once a year	7	35
Total	20	85
Missing	3	15
Total	23	100

Based on the above results, there seems to be room for improvement when it comes to involving the employee group in the process. Even though the alcohol policy is evaluated fairly regularly, the employee group was usually left out of the evaluation and this could have a negative effect on the employee support for the policy.

Recapitulating the results in the tables above there seems to be a degree of uncertainty about whether the alcohol policy among the participating organisation was a success. Some 43 percent said it was a success, at the same time

approximately 35 percent said that they neither agreed nor disagreed that the policy was working, and 13 percent didn't really know what the outcome of the policy was. This uncertainty is understandable since evaluation of the policy was not carried out regularly, 30 percent of respondents indicated that their policy was evaluated once a year and an additional 26 percent said it was evaluated every second year. At the same time 26 percent of the participants said that they did not know how often the policy was evaluated. When analysing these answers it should be remembered that this question was specifically aimed only at the person in charge of the policy work. Therefore it was surprising to see such a large proportion of managers who were unaware of the frequency of policy evaluation. Furthermore, almost nine percent indicated that their policy was never evaluated. Although one cannot attest to the quality of that evaluation.

In addition, 42.7 percent of all participants reported that the employee group was not consulted about the policy as part of the evaluation process. Only 10.9 percent confirmed that the employee group were consulted during policy evaluation. It is likely that such a large group of employees, who are directly affected by the policy, could provide some valuable information about the policy, and how well adapted to it is to the organisation's needs. Therefore, organisations that ignore consulting the biggest stakeholders of an alcohol policy during evaluation loose a valuable resource and this is reflected in the low support for current policies.

The overall image of how successful the participating organisations' alcohol policies were deteriorated due to the general lack of evaluation, including the lack of consultancy with the employee group. Evaluation could provide the organisation with important leads into the efficiency of the policy, its cost effectiveness and how well integrated it is in the organisation's everyday life and there is potential for great improvement in the area of policy evaluation before it would be considered quality practice.

5.5 Comparisons between manager and employee groups

As stated in the methods for this section, the Mann-Whitney *U* test was chosen as the tool to analyse the employer/employee questionnaire data and to determine whether there were any significant differences in the responses between the manager group and the employee group, as well as between men and women.

The test revealed a significant difference between managers and employees on 15 of the questions in the survey, the questions were located in six of the questionnaires 10 categories. The categories with the significant responses were: Involvement, Integration, Support, Amount of education, Impact of Education and Evaluation.

Results showed that managers overall were more positive in their responses than the employee group. There may be several potential reasons for this. It is possible that these six categories, from a policy implementation perspective, are more relevant to managers than employees.

For example, level of involvement showed significant differences in responses between managers and employees see Table 5.30 below. It would be logical to assume that managers to a greater extent would be involved in the development of an organisation's alcohol policy. But what these results would indicate, since the mean scores for managers were not particularly high, is that managers responding to the questionnaire were not involved in the policy development to the extent one would expect, considering that the questionnaire was aimed specifically at managers responsible for the policy.

Table 5.30: Level of involvement in policy development			
	Managers Mean ± SD	**Employees Mean ± SD**	**Assymp. Sig. (2-tailed)**
To what extent were you involved in the development of your current alcohol policy	3.74 ± 1.685	1.78 ± 1.296	.000
To what extent was the employee group involved in the development of the current alcohol policy	3.39 ± 1.500	1.79 ± 1.743	.000

The conclusion on can make from this is that the managers currently responsible for the organisations alcohol policy is not the same managers who were involved in the development and implementation of the policy. Another possible conclusion could also be the agency responsible for the development and implementation did not consult managers to the extent on could assume from their job position.

While it was expected that employees would not be involved in the development of the policy to the same extent as the managers, the mean scores of the employees in this category were very low indicating non- to a very low level of participation. When it comes to knowledge about how well adapted a policy is to the context in which it is supposed to work, it is more likely that a manager would have a better understanding of the conditions surrounding work organisation and the characteristics of the workplace than employees. This is simply due to the fact that managers to a greater extent are more involved in these matters than employees. It would therefore seem reasonable that the employees would provide more conservative responses to questions concerned with how well adapted a policy aimed at preventing alcohol related harm is to the specific characteristics of their organisation, see Table 5.31.

Table 5.31: Appropriateness of policy design			
	Managers Mean ± SD	**Employees Mean ± SD**	**Assymp. Sig. (2-tailed)**
The alcohol policy is well adapted to the way we organise our work in this organisation	3.57± 1.308	2.59 ± 1.522	.005
The alcohol policy is designed to the specific characteristics of this workplace	4.04 ± 1.065	3.24 ± 1.462	.014

Looking at the questions related to levels of support one can see that there were approximately a one point gap in between the mean of the managers and the mean of employees on the three questions, see Table 5.32. What is of particular interest in this group of questions is that the standard deviation among the managers is very low, compared with the employee group, indicating a strong consensus among managers. When conducting numerous statistical tests on the same data set, as is the case in this study, it is usually accepted that good practice includes Bonferroni adjustments to adjust significant levels to a level equivalent to the original significance levels, which in this case was 0.05. For a number of reasons the author decided not to conduct Bonferroni adjustments. The rationale behind this desicion is discussed in section 7.6 page 160.

Table 5.32: Support for the alcohol policy			
	Managers Mean ± SD	**Employees Mean ± SD**	**Assymp. Sig. (2-tailed)**
There is strong support from senior management for the current alcohol policy	4.45 ± .596	3.48 ± 1.738	.018
There is strong union support for the current alcohol policy	4.36 ± .581	3.09 ± 1.738	.019
All employees have a responsibility to support the organisation's alcohol policy	4.91 ± .294	4.31 ± 1.015	.000

On the question regarding employees' responsibility to support the organisations alcohol policy the employees' score was significantly different to the managers' ($p<.000$). This particular response could be analysed in various ways, for example, it is possible that the employee group feel obliged to answer favourably on this question either because it is expected of them or as a way to avoid repercussions. One the other hand, it is possible that the general understanding among employees of the effects excessive alcohol use could have on the workplace actually ends up in employees feeling how important it is to support their organisation's policy against alcohol. The question produced a significant result even though the mean value of both groups is relatively close to each other, only 0.60 apart; it is evident that the standard deviation is much smaller in the manager group than in the employee group.

On the question on how much education the managers versus employees had received the Mann-Whitney *U* test indicated a significant difference between the two groups with managers scoring higher than employees (Table 5.33). It would be expected that managers would receive more education than employees since it is their job to monitor the potential harm from alcohol within the employee group.

Table 5.33: Amount of education received			
	Managers Mean ± SD	**Employees Mean ± SD**	**Assymp. Sig. (2-tailed)**
How much education have you received regarding alcohol related harm in the workplace	3.36 ± 1.002	2.43 ± 1.148	.000
How much education have you received regarding what effects alcohol can have on your work performance	3.50 ± .964	2.60 ± 1.230	.001
How much education have you received regarding lifestyle related issues (e.g., regular exercise, nutrition, etc.)	3.64 ± .902	2.88 ± 1.231	.003

For the questions regarding the impact education had on the respondents it is interesting to see that the managers scored higher on educational impact than employees, see Table 5.34. This could be viewed from different perspectives, on one hand it makes sense that the manager group scores higher on this item because they probably received more education during the planning and implementation phase than employees and as such would score higher than the employees. On the other hand, a less educated group, which could be either managers or employees, would be more likely to give a high score on the impact of education than a group with a relatively good education regarding alcohol related harm.

Table 5.34: Impact of education			
	Managers Mean ± SD	**Employees Mean ± SD**	**Assymp. Sig. (2-tailed)**
To what extent has the education increased your knowledge regarding how to develop a healthy lifestyle	3.41 ± 1.260	2.55 ± 1.833	.001
To what extent has the education increased your knowledge about alcohol related harm in the workplace	3.68 ± 1.287	2.50 ±1.345	.000
The information given during education was well balanced and provided me with information about the potential positive and negative aspects of alcohol consumption	3.62 ± 1.161	2.74 ± 1.629	.028

On the question whether the employees has been consulted about the alcohol policy, as part of the evaluation and whether it is discussed in the workplace the Mann-Whitney *U* test indicated a significant difference between managers and employees, with the managers scoring higher, see Table 5.35. What the mean scores also indicate is that policy is not discussed to a great extent in the workplace nor is the employee group consulted about the policy as a component of the policy evaluation.

Table 5.35: Policy evaluation			
	Managers Mean ± SD	**Employees Mean ±**	**Assymp. Sig. (2-tailed)**
The policy is on a regular basis discussed in the workplace	2.71 ± .784	2.21 ± .995	.016
The employee group is, as a part of the evaluation, regularly consulted about the alcohol policy	2.86 ± .854	1.88 ± 1.313	.001

When conducting the Mann-Whitney *U* test on men versus women only on two questions were the mean scores significantly different between the two groups, see table 5.36. Men scored higher than women on both these questions.

Table 5.36: Questions that produced a significant result between men and women in the Mann-Whitney U test					
	Men		**Women**		
	Mean	**Std. deviation**	**Mean**	**Std. deviation**	**Asymp. Sig. (2-tailed**
The alcohol policy is well adapted to the way we organise our work in this organisation	3.16	1.413	2.52	1.563	.030
The employee group is, as a part of the evaluation, regularly consulted about the alcohol policy.	2.39	1.159	1.84	1.324	.021

5.6 Summary

Overall, the organisations in the study seemed to have little employee participation during the development and implementation of the policy, which may have led to low levels of support for it from both the employee groups and the unions. A contradictory result was that even though the level of support among employees for an organisation's policy was low, they believed 'to a great extent' that everyone

had the responsibility to support their organisation's alcohol policy. Regarding the level of education and its impact, the results indicated a wide disparity in the perception of the amount of education received regarding alcohol related harm and associated issues.

In conclusion the interviews with managers and employees indicated that effective prevention programs include the following items:

- Employee involvement in policy development and implementation.
- Knowledge about the potential impact of excessive alcohol use.
- A clear link between cost and benefits, such as improved work climate.
- Comprehensive, not dealing with alcohol as an exclusive matter but as an inclusive incorporating a broader health promotion perspective.
- Emphasising the improved public perception of an organisation working to prevent potential problems (i.e., good PR).

On the other hand, this phase of the study identified items that should be avoided altogether since they may have a negative impact on preventive efforts, for example:

- Focusing on excessive alcohol use as an individual problem.
- Developing highly complex models that are difficult to implement.

Individualising the problem draws attention away from organisational issues that may have a significant impact on levels and patterns of alcohol use, a notion supported by findings in the literature review, and as such have little positive effect in reducing alcohol use in the workplace.The finding that highly complex models that are difficult to implement have been identified by managers and employees as an obstacle for prevention programs is consistent with what the evidence indicates is quality practice.

Therefore it is evident that the focus should be on structural organisational factors since that will ensure greater sustainability as well as focusing on components that can have an impact upon individual alcohol use. Working on an individual level increases the risk of relapse since the focus is diverted from organisational climate and the potential triggering factors are left untouched.

CHAPTER SIX

TRIANGULATION

6. Introduction

In the previous chapters the three different phases of information collected for this study were presented: the critical literature review, interviews with key experts and an employer/employee survey on Swedish white-collar industries. In this chapter all these results will be brought together and be compared through the use of the methodology of triangulation.

When using more than one approach to study a research question, mixed methods or mixed sources of information, something that is better known as triangulation can be used to enhance the confidence in research findings by getting different perspectives upon one particular phenomenon (Bryman 2006; Mason 2006; Moran-Ellis, V.D. et al. 2006).

6.1 Ranking

The main purpose of this study was to determine what the evidence base, that is, high quality research evidence, has identified as components of best practice. As seen from the critical literature review, due to numerous methodological problems, the evidence base can at best be described as thin. It was deemed necessary to locate other sources of information that could contribute to a determination of best practice. It has been argued that evidence-based medicine should draw on the best available evidence, the expertise of individual practitioners to apply that evidence in the context of the unique needs of the individual and the informed consent of the individual {Sackett, 1996 #1638}. Consistent with has approach, this study drew on the best available evidence and combined this with the expertise of key practitioners/experts and investigating current practice and perceptions of managers and staff in white-collar Swedish organisations (i.e. the research consumers). By using triangulation of the information from three different sources it becomes possible to better explore the strength of the evidence base for best practice.

The ranking of the strength of evidence is based on the weighting of available information. Information collated from the critical literature review is categorised as the strongest evidence on the basis that the information is based on empirical evidence and has gone through a process of peer review before being published. In addition, in this review, the researcher critically reviewed the various research reports and rated them based on methodological rigour/weakness. Information from key experts is weighted lower since it is unreviewed information. The third ranked information was that drawn from workplaces. The lower ranking was determined on the assumption that expert advice may be more likely to be based on an understanding of the scientific literature/evidence, a proposition less readily argued for consumers/workplaces. Information from employers and employees is likely to be based on information from one (or at most a small number of) workplace, it has not gone through a peer review process and is a combination of quantitative and qualitative knowledge of "what works" in the field,. Thus, the ranking system adopted for this research is as follows:

1st Critical literature review

2nd Key experts

3rd Employers & Employees

The second step of the ranking of the evidence base is to determine the strength in support for a particular component of quality practice. Following the rationale of scientific strength described above, components that are supported by the literature and experts ranks higher than components supported by, for example, the literature and workplaces. On the other hand, components supported by literature and workplaces ranks higher than a component supported by experts and workplaces due to the scientific strength attributed to evidence from the literature. This highest ranking of the evidence goes to the components supported by all three sources. Based on this rationale a grouped ranking would look as follows:

1st Literature, Key experts & Workplaces

2nd Literature & Key experts

3rd Literature & Workplaces

4th Literature

5th Key experts & workplaces

6th Experts

7th Workplaces

In this particular analysis the focus will be on the first four levels with components supported by two or more sources of information. The analysis consisted of a search for common themes, themes that were given prominence in one group, starting with the literature review as based on the ranking mentioned in the previous section, then the researcher searched through the responses from the other sources for repeats of these themes.

6.2 Analysis

As seen in table 6.1 only two key themes appeared to be identified by all sources (i.e. literature, experts and workplaces and an additional four key themes were identified by the literature and used in the workplaces.

Table 6.1: Components of best practice	Literature review	Expert questionnaire	Workplace questionnaire
Consultation/Inclusive	✓		
Universal application	✓	✓	✓
Organisation specific	✓		✓
Comprehensive	✓	✓	✓
Instructions and procedures for responding to drug- related incidents			✓
Drug testing			
Change should be gradual and informed	✓		✓
Transparency	✓		✓
Education and training	✓		✓
Evaluate the implementation process			

6.2.1 Universal application

In the analysis, only two key themes appeared to be identified by all sources (i.e.

literature, experts and workplace staff). The first of these could be described, as defined by (Duffy and Ask 2001), as universal application of a program and comprehensiveness. In approximately 94 percent of the investigated workplaces stated that their alcohol policy applied to everyone within the organisation. A promising result, particularly since co-worker alcohol use can be a significant source of work related stress and, in a longer perspective, can have a negative impact upon individual health. For example, a paper published in 1998 by Bennett and Lehman found that as many as 40 percent of all employees in their study expressed great concerns over co-worker alcohol use. A majority of key experts put forward that the entire work group should be targeted when developing a program aimed at preventing alcohol related harms and the rationale for this is that no employee group is immune alcohol problems and it does not discriminate employees or managers. The key experts also stated that total involvement of the entire workforce, employees and employers, is the only way to achieve best practice. This is a step away from the traditional way of approaching harm minimisation in the workplace where employees commonly were the main focus and the individual in particular had to be monitored to ascertain risky drinking practices. A further argument from key experts to why total inclusion is vital for best practice related to the level of program credibility since a program aimed only at employees could be seen as punitive and discriminating and cause significant resistance and mistrust within the organisation, something that would be highly counterproductive if you attempt to implement an effective prevention program.

So, universal application serves multiple purposes, both practical and psychological. From a practical point of view a universally applied prevention program becomes easier to maintain and implement since it can be distributed to the entire organisation. Universal application also assists in moving away from the sickness aspect of alcohol related problems and puts the entire issue of prevention of alcohol related harm on an organisational level rather than focusing on the individual. The biggest benefit of universal application appears to be the psychological effect it can have on an organisation since no single employee (i.e from top management to subcontractors) is immune to the potential ramifications

of overstepping the program. Universal application sets the standards and sends a clear message throughout the organisation about acceptable conduct and what is expected of everyone working in the organisation when it comes to alcohol use. There are, in other words, great benefits to reap from universal application of prevention programs both practically and psychologically.

6.2.2 Comprehensiveness

An important component, according to the literature and key experts, is that a program aimed at the prevention of alcohol related harm needs to be comprehensive. What this means is that excessive alcohol use is, as seen previously, often influence by numerous other factors; for example, perceived access to alcohol, level of permissiveness in the organisation, work related stress, and a variety of other factors that can impact upon the individual. Alcohol use can serve a multitude of purposes, it can be used as self medication to wind down after a hectic day in the office, to relieve musculoskeletal aches and pains or act as the social glue that ties a workgroup together inside and outside the work context. A majority of experts emphasised that, as part of best practice, programs need to be comprehensive enough to encompass the context of the workplace, and anything else would reduce the effectiveness of a program targeting only one of the mentioned areas. It has, for example, been identified that health promotion programs can act as an effective vehicle for the prevention of alcohol related harm since health promotion with its positive connotation assisting in reducing fear and stigma associated with alcohol. It therefore becomes easier for an organisation to accept health promotion programs rather than exclusive alcohol harm prevention programs since the latter has the potential to label the employer as a problem organisation. Similarly, individuals may be more prone in participating in a health promotion program, especially if the employer provides incentives and positive feedback to participants. The greatest rationale behind comprehensive programs aimed at preventing alcohol related harm is that there are so many factors that contribute to the development and maintenance of hazardous drinking (e.g. individual, environmental and drug) and there are diverse patterns of drinking (e.g. drinking to intoxication, regular use and irregular use) that no single strategy is

likely to be effective in all cases, therefore diverse approaches are required, addressing different patterns of drinking and different risk factors (e.g. availability and education).

Similar findings arise from the critical literature review, there is evidence indicating the importance to look at the entire organisation since one important predictor of alcohol use in, and in relation to, the workplace was the cultural norms associated with drinking. In other words, If employees perceive that there is easy to access alcohol in the workplace or supervision is lenient with little or no risk of getting caught being under the influence or consuming alcohol at work it is more likely to occur, compare to an environment with high levels of supervision and no acceptance for being under the influence of alcohol. Further support for a more comprehensive approach to prevention of alcohol related harm emanated from the critical literature review. For example the type of work an individual is involved in, both in terms of position and occupation can predict levels of alcohol use but the relationship is not always linear. In many countries the conclusion of a business agreement is often associated with a drink or two and it has been found that particularly managers in sales position are more at risk than managers in other positions. This may be even more pronounced in smaller organisations where there may be only one person in that position which would put this individual at significant risks of developing harms associated with alcohol use.

A common perception is that high-risk jobs, especially among those who are not working in those particular fields, cause more stress and therefore alcohol use would act as a release mechanism to reduce that stress. For example, fire fighters are working in a high-risk environment that requires significant levels of concentration and professionalism to avoid serious harm to themselves or their colleagues and it would be a fair assumption that individuals in this occupation are feeling more stressed. Evidence from the literature review contradicts this notion in terms of stress, it was reported that fire fighters, for example, did not experience abnormal stress levels and it was impossible to find any correlation between stress and alcohol use. On the other hand, being highly dependent on your teammates it

developed a close nit relationship between colleagues and a stronger drinking climate outside of work. Something that could potentially explain why they did not experience high levels of stress is the high levels of support from colleagues which may act as a diffuser of stress reactions. A key component in the aetiology between alcohol related problems and stress was individual coping skills, i.e., how a person deals with a stressful situation is key to whether he or she will develop alcohol related problems. When faced with a situation not previously familiar with a stress reaction is triggered and individual capabilities will determine how a person deals with the situation. Some people manage to use strategies that were successful in similar situations, they may go to the gym after work, and thereby relieve the stress, others, who do not have that experience, may turn to alcohol as a way to rewind after a stressful day.

6.2.3 Organisation specific

There is a strong consensus in the literature that in order for prevention programs to be effective they need to be developed in conjunction with the organisation and reflect the unique features of the organisation in which they are to be implemented. This notion was further supported by the results of the workplace survey and it was a component raised by a few of the experts. In the literature there was strong support for organisation specific programs where the program content and structure take into consideration the unique features of each organisation. This would include taking factors such as gender balance, how work is organised, organisation size and structure (i.e. does the organisation have additional branches), type of industry. Understanding the characteristics of an organisation will assist in removing obstacles, as for example, ensure that there is adequate supervisions for people working from outside the office, that has the potential not only to minimise the effectiveness of a policy program but potentially render it obsolete, in the sense that it is impossible to implement due to organisational or intrapersonal reasons. The aetiology of alcohol use is a highly complex and as stated earlier, see section 6.2.2, there are a range of factors that contribute to the development and maintenance of harmful drinking, factors that, for example, are

linked to the individual, the environment and the drug itself. In addition there are diverse patterns of drinking (e.g. drinking to intoxication, regular use and irregular use) that may be influenced by drinking practices in the organisation. Based on consistent findings in the literature it is apparent that there is a need for diverse approaches that address different patterns of drinking and different risk factors (e.g. availability and education) unique to the organisation in which the program is to be implemented.

It is positive to see that among the examined workplaces there appears to have been a strong sense that their policies were well integrated into everyday life of the workplace, an indicator that the policy was not viewed as an add-on but part of normal business Similarly, a majority of participants indicated that the policy had been developed to suit the particular characteristics of their organisation. This would be a good indication on that there was sufficient understanding from the ALNA group of the importance to take into account the uniqueness of each organisation when developing a policy. It would also suggest that the organisations themselves were involved in the development of their alcohol policy. A finding that someone goes against this is the fact that less than half of the participants thought that the policy was well adapted to the way work is organised in the organisation. This could on the other hand be caused by a change in how work is organised as a result of the rapid and dynamic conditions of the working life in the 21th century and if this is the case it raises new challenges for policy developers.

6.2.4 Change should be gradual and informed

In order to reduce resistance caused by change it should, according to the findings in the critical literature review and based on the results of the workplace survey, be implemented in a controlled manner where change is introduce gradually and accompanied by sufficient and correct information. This component is intimately linked to two other components of best practice, i.e., transparency and education and training something that will be discussed later on in this chapter. It is well established in psychological research that change causes resistance due to the separation from something that is established and comfortable into something new

and unknown. This is also the reason why it is vital to proceed cautiously and to replace the known with something that can be perceived as something positive, in other words, create a win-win situation for all involved parties. An important component in this change process is that senior management fully endorse the policy both in words and action and that they make clear statements that it is a priority for the entire organisation.

The other reason why it is important with gradual and informed change is to create local ownership of the policy, as seen in the literature the opposite can result in a feeling of alienation and isolation and that important decisions are taken above their heads, something that will further increase a feeling of lack of control over their work situation. Being thorough in the implementation and planning phase of a policy program will also bring hidden agendas to the surface, it may be particular political agendas held by union officials for example. The existence of these types of agendas can severely impact on the effectiveness of a prevention program. Among the participating organisations there are indications that the implementation process has gone through these stages and that there are steps in place to continuously provide information about the existing company alcohol policy.

6.2.5 Transparency

A lack of transparency, both during the planning and implementation phase of a program aimed at preventing alcohol related harm is, as seen in the literature, and identified by the literature as well as employers and employees, likely to create high levels of suspicion. There may be multiple reasons for those suspicions; a new policy may be seen as an attempt to monitor employees with the purpose of disciplining them whenever the chance arises.

Lack of transparency may create suspicion and an alcohol policy may appear as an attempt to monitor and discipline employees, evidence of this was presented in the findings of the literature review. There are several plausible reasons to why there is growing suspicion in an organisation as soon as a change is suggested or introduced.

It may be something that is related to the history of the organisation where it previously have been problems with transparency when other types of changes have been planned, for example, if the company has to lay off employees. It may also be caused by ill defined programs that only add to a feeling of confusion, particularly if the implementation of such a program was rushed and with little or no involvement from the employee group. It may also be that particular groups have reasons for not wanting an alcohol policy in place and then it is in their interest to spread misinformation regarding the purpose of the policy something which in turn is likely to result in growing suspicion among employees. Among the participating organisations there appear to be a strong support for the alcohol policy, particularly among managers and union representatives, slightly less so from the employee group. This could be an indication of the level of involvement in the development and implementation process, which was higher for managers than for employees. A very interesting finding is that almost every participant, managers and employees, indicate that everyone in the organisation has a duty and responsibility to support the organisations alcohol policy. So even if there is less support for the policy per se from the employee group they still consider it to be their responsibility to support the implementation of the policy.

6.2.6 Education and training

A vital component, based on the results from the literature review and the findings of the employer/employee survey, was education and training that, not only is aimed at increasing participant's knowledge about the impact of alcohol on the individual and the workplace, but also as an important component in gradual change and transparency. Education and training, if correctly implemented, will provide both managers and employees with a good understanding of the harms associated with excessive alcohol use in and in association with the workplace. As mentioned previously, in relation to more comprehensive programs, training about alcohol should ideally be given in a broader context where other work related issues are covered as well. The rationale for this was that it will place alcohol use in context and highlight other issues that research has found to have a strong correlation to levels and patterns of drinking. Education and training will provide all

participants with a good insight, if done properly, on the content of the policy, level of support available if someone is experiencing alcohol related problems as well as a clear description of individual rights and obligations in regards to testing, access to work and other procedural issues related to being under the influence.

Particularly education and training of managers and supervisors play an invaluable part since they not only need training on the technical aspects of a policy, but, as highlighted in the literature review, perhaps even more importantly, on how to deal with people who they suspect are having alcohol related problems.

6.2.7 Consultation/inclusiveness

One component of best practice that was only highlighted in the critical literature review was consultation/inclusiveness. To some extent this component of best practice links what was given as rational for comprehensive programs, eg, one part of consultation and inclusiveness is to entangle the complexity of organisational culture. The foundation of the consultation process is to include and consult with everyone affected by the implementation of a program, this should preferably be done throughout the development process as well as the final implementation, since this will assist in develop credibility and ownership over the program, a strong predictor of sustainability.

6.2.8 Instructions and procedures for responding to drug-related incidents

Clear instructions and procedures for responding to drug-related incidents were only supported by the weakest ranked source of information, the workplaces, and not through the literature and/or the key experts so this result needs to be interpreted with great caution. However, despite this it raises some valid questions. Firstly, based on the findings in both literature and points made by key experts it has been stated that prevention programs need to be well defined and common sense would bring to the conclusion that the inclusion of instructions and procedures for responding to drug-related incidents could be of great value for all employees, but perhaps particularly for supervisors and management. One of the reasons why it is not supported by literature and experts may be that this particular

component is seen as an implicit part of any occupational health and safety program. Or, similarly, that it is implicitly an integrated component of an alcohol and drug policy. Secondly, is it the case that Swedish workplaces have made greater advances in this area compared to the existing international evidence base and international key experts? The findings from the workplace survey clearly indicated that all these components are incorporated in their respective organisations policy and that the level of awareness of these components was very high. What appears to set this result aside is the fact that everyone in the organisation appears to be highly aware of what to do if a colleague is suspected of experiencing alcohol related problems. The question on could ask is whether this is a result of a Swedish management style were some management and supervisory tasks are delegated onto the employee group or if this is universal.

6.3 Conclusions (what does this tell us and what can we learn from it for future research)

Based on the outcome of this analysis, the most obvious conclusion is that there is very little conclusive and/or consistent evidence to provide us with a map of quality practice. Only two out of ten different components of quality practice, as suggested by Duffy and Ask (2001) were supported by the three different data sources: literature, key experts and workplace survey. This obviously provides very little support for any model of quality practice but rather an inconclusive cluster of information caused, to a great extent, by the methodological shortcomings presented in the literature review, the relatively small samples of key experts and white-collar organisations.

The outcome of the analysis raises a couple of important questions. Firstly, why are some of the items of quality practice only identified in the literature and the workplaces but not by the key experts? Secondly, why is an item of quality practice only in effect in Swedish workplaces and not present in literature or mentioned by acclaimed international experts?

Beginning with the first question, it is quite possible that this is caused by the relatively small sample of key experts in this study. If the sample would have been bigger it is possible that a greater consistency would be found between what was supported by the literature, the workplace and the key experts. With a larger sample of key experts it would have been possible to extract more mature data and reach a higher level of certainty about the responses given and also reach a stronger correlation between quality practices as identified by the literature review and Swedish white-collar workplaces.

The second question is very difficult to give any definitive answer to, one can only speculate why Swedish workplaces appear to be more developed in the area of prevention of alcohol related harm compared to the evidence found, to some extent, in the literature but, significantly more so compared to what was pointed out by the key experts. One explanation could possibly be found in Sweden's relatively long history of occupational health and safety work and a strong culture of transparency between management and employees, as well as strong union involvement: three components that were likely to promote an open discussion about health and safety issues in workplaces between the parties on the labour market. If we go back to Table 6.1 one can clearly see a strong correlation between factors that have been addressed by workplaces and the literature, there is only marginal difference between the two, and there is significantly more discrepancy between key experts and the workplaces. What contradicts the notion about transparency between management and employees is the fact that Swedish workplaces did not appear, as indicated by Table 6.1, to be very proficient in the area of consultation and inclusiveness.

CHAPTER SEVEN

DISCUSSION AND RECOMMENDATIONS

7. INTRODUCTION

To get an understanding of what constitutes best practice when attempting to prevent alcohol related harm in the workplace, this study explored the contextual setting of alcohol, using a three-step research design consisting of both qualitative and quantitative methodologies. Obstacles to, and the facilitators of, best practice were identified from three different data sources: 1) a comprehensive critical literature review, 2) interviews with leading experts on prevention of alcohol related harm and, 3) interviews with managers and employees in white-collar work-settings.

Using a three-step exploratory research design showed itself to be very useful since research on this topic is scarce and generally of poor quality. The basic idea behind this design was to let the results of each step guide the researcher forward and provide details used to develop the next phase. Conducting a literature review is usually the first step of any research project in order to get an understanding of the topic of research, current findings and to build a knowledge base upon data collection instruments can be chosen or developed.

Early on, it was determined that quantitative data would not provide enough in-depth information regarding obstacles and facilitators for successful implementation of prevention efforts. The reason for this was primarily because some of these factors are built upon experience and may therefore be difficult to quantify. Therefore it was important to try and capture this knowledge and the best way of doing so was to develop a questionnaire with open-ended questions to give the respondents the possibility of elaborating on their answers. The questionnaire also incorporated a component where the respondents were asked to identify other experts in the field that they thought could provide valuable information. This assisted the researcher in widening the circle of experts in directions that otherwise would have been out of reach. Due to the character of the questionnaire (i.e., its

open-ended design) it was estimated that the response rate would be relatively low since that is a common problem with this type of questionnaire. Several measures were implemented to overcome this problem. Initially, the questionnaires were pilot tested on a representative number of experts in order to ensure that only the absolute necessary questions were included and the questionnaires took as little time as possible for the experts to complete. Using an electronic questionnaire was also part of the strategy to increase the response rate. Firstly, it would make it possible for the respondents to complete the survey at a time suitable for them. Secondly, respondents would not have to deal with envelopes and papers since the respondents would attach the completed document to a normal e-mail. Thirdly, the respondents had the opportunity to save a partly finished questionnaire behind the protection of passwords, something that in turn would assist in protecting the integrity of the respondent. All these measures were developed as a way to increase the response rate and make the respondents feel as comfortable as possible participating in this study.

With the responses from the expert's survey the researcher systematised and categorised the results and this assisted in developing the data collection instruments for Phase 3.

Phase 3 was considered to be an essential component of this study, since the overall aim was to identify good practice and to investigate obstacles and facilitators of best practice. Managers and employees are the end-users of policies aimed at preventing alcohol related harm in the workplace and they would be able to indicate what interventions are acceptable and not acceptable in relation to everyday business. The researcher's experience from working with small- and medium size organisations has showed that these types of organisations are often very pragmatic, they want to know "what's in it for us". This is particularly important for small- and medium size organisations since the financial- and human resources available to invest in proactive health promotion often are very limited.

The results for each phase will be discussed in the following sections.

7.1 Comprehensive critical literature review

Findings from the critical literature review indicated a weak evidence base caused by a range of methodological shortcomings, as for example, insubstantial methodological descriptions, use of self-reported drinking data, no analysis regarding confounding variables. Rating the peer-reviewed papers was an essential step towards identifying best practice as the level of scientific quality would be a strong determinant when attempting to identify what constitutes best practice and what does not. The critical literature review also assisted the researcher in identifying individuals with expert knowledge in the area prevention of alcohol related harm for Phase 2 of the study.

One of the problems with an extensive critical literature review is that it is always a historical review since there is a constant production of peer-reviewed articles. The researcher was therefore forced to choose an end date for the collection of articles, potentially missing more current reports.

Results from the extensive critical literature review gave rise to a number of issues. Firstly, the evidence base regarding prevention of alcohol related harm in the workplace is at best very small. Over the years this is an area that has received very little attention and it is not until the past 10-15 years a growing interest in the area has been seen.

Secondly, the quality of research is as mentioned previously, in general, poor and tainted by a number of methodological problems. The most common problem is that studies have used cross-sectional research designs. Why is this a problem? The main problem arises when attempting to determine the direction of causality as a cross-sectional design

Thirdly, a problem that faces all researchers when attempting to determine prevalence levels of drinking is that in most cases rates, are underreported due to the use of self-reported drinking data. In general, this was addressed as a problem in the peer reviewed papers. When attempting to find a paper that actually focuses

on the problem of underreporting the researcher found a study conducted by Hoyer and colleagues (Hoyer, Nilssen et al. 1995). This was a community study, and therefore not included in the extensive critical literature review. What makes this study particularly interesting was the almost clinical setting in which it was conducted; it was conducted in the remote community of Longyearbyen on Svalbard (Spitsbergen), Norway. This community is relatively isolated for long periods of the year due to snow and ice. It was therefore possible to remove many of the confounding variables usually found in studies on self-reported drinking that would affect the study results. For example, alcohol importation to the island occurs only via official channels, thus reasonably accurate consumption by the population can be determined by sales figures. Furthermore, due to its tax free status, alcohol is very cheap in Longyearbyen, virtually eliminating the need for any home brewing. What the study found was that underreporting of self-reported drinking could be as much as 60 percent, compared to official sales figures.

Fourthly, an overall lack of consistency in methodology is a common problem in studies that attempted to calculate the costs associated with excessive drinking for the individual, workplaces and the community as a whole. This made it virtually impossible to compare any of these studies. One could say that the only thing the studies on the costs of excessive alcohol use have in common is that they all consistently indicate a substantial financial and social burden on the individual, workplaces and communities.

In conclusion, the critical literature review gives a fragmented picture of a field with methodological problems and an overall lack of evidence base. It is quite clear that there is a need for more quality research. The additional benefit enhancing the research evidence is is that it will increase the likelihood of successful models that are adaptable enough to be implemented into an organisation's everyday life.

7.2 Expert knowledge

It was considered vital for this study to obtain input from leading experts. Besides the academic labour of getting published in peer reviewed journals, many experts

also accumulated their experience from practical work out in the field, an issue that the researcher had not considered in the initial design of the research instrument. The outcome of the expert interviews was relatively extensive and as mentioned in Chapter 4 the responses were summarised and categorised into a number themes, themes that were later used to develop the instrument for Phase 3 of the present study. One of the key findings in the expert interviews was the importance of knowledge, both as an obstacle and a facilitator, when attempting to implement a program aimed a preventing harm from excessive alcohol use. It can work as an obstacle when knowledge about the potential harm of excessive alcohol use and the benefits from working proactively to promote health is lacking among managers and employees. On the other hand, it can be a great facilitator when this knowledge is in place as it would help ease the implementation process of programs and policies.

The snowball sampling method proved valuable since this guided the researcher towards people who could provide important information for the study. This also helped the researcher to build a network of valuable resources, an insight of how research is conducted in various parts of the world and what research questions are currently on the agenda.

7.3 The target group – managers and employees

Anecdotal information gathered during the researchers own work with organisations, private enterprises and government agencies, indicated that most managers had some collective enquiries. Firstly, "*What's in it for us"* or "*Why should we invest time and money on something that isn't a problem?"*, relevant questions when a manager has to invest in an add-on to the organisation's everyday life. Secondly, "*We don't have any alcohol problems in this organisation",* another relevant issue that reflects a lack of knowledge regarding alcohol related harm in the workplace and how it could affect the organisation. This highlights two vital requirements when researching and implementing prevention programs targeting this phenomenon. Firstly it has to be worthwhile (i.e., based on a solid evidence

base) and that education and knowledge are vital to 1) break down barriers and 2) to pave the ground for a successful outcome.

The results from Phase 3 also indicated that even though the results should be treated cautiously due to the relatively small sample size, as well as the low response rate, there are indications that quality practice need to be built upon a solid evidence base, include a strong educational component and be part of a proactive health promotion effort.

A somewhat surprising result was the overall lack of evaluation among participating organisations. Evaluation has to be a component incorporated at the planning phase otherwise it becomes very difficult, or near impossible, to conduct an evaluation when the implementation has already taken place. The problem lies in the fact that no baseline study is usually conducted and therefore there is nothing to compare the end result to. Even though evaluation was lacking, a number of managers responded that the policy had been a success, an interesting claim. The reasons for this perceived success could be multiple. For example, it could be an educational issue with a lack of understanding about the importance of conducting sound methodological evaluation. Another possible explanation could be that there is a perception in the organisation that the policy seems to be working and therefore there is no need to evaluate it.

7.4 Strength of the study

One of the major strength of this study lies in its research design. Because of the current dearth of research on prevention of alcohol related harm in the workplace, an exploratory approach was deemed to be the best option. When conducting a study of exploratory character a researcher usually has very little information at hand to start with, as was the case with this study. In such cases every new piece of information can lead the researcher in a certain direction, but it is also very important to keep an open mind and not limit the investigation onto any single path. In order to avoid this, the study utilised three different sources of information; the literature, experts and managers and employees.

This leads us directly into the first phase of this study, the extensive critical literature review. In order to avoid being led astray by low quality research, and stepping away from one of the main features of this study, that is, using evidence based research to determine what constitutes best practice when working with prevention of alcohol related harm. This is also the reason why it was important to determine the quality of the research papers included in the critical literature review.

Following the exploratory path, the critical literature review assisted the researcher in identifying high quality research and experts suitable for the second phase of the study. By evaluating the quality of the research, the methodology they used and frequency of publications of experts where identified. As mentioned in the methodology sections in Chapters 3, 4 and 5, the comprehensiveness of the questionnaire was possibly one reason why the response rate of the experts in Phase 2 dropped. Taking that into consideration, the experts provided valuable information about obstacles and facilitators that in the preparation for phase three were incorporated in the development of the manager and employee questionnaire. Providing the experts with an electronic questionnaire proved an efficient way of gathering data and valuable feedback were given outside the questionnaire from several experts.

An additional strength of the study is the in-depth qualitative data provided by the three sources of data. The qualitative data provided the researcher with an insight into the underlying dimensions that the quantitative data were not able to give. For example, in Phase 2 with the expert interviews, it became evident that the experts could provide more information than was initially expected. They provided a plenitude of information of their own experiences working with various types of organisations from a hands-on perspective and not only information that was related to their more traditional academic work.

7.5 Limitations of the study

One of the problems of the current study was the low response rate on the surveys conducted on leading experts on prevention of alcohol related harm, but particularly on the questionnaires aimed at managers and employees in Swedish workplaces. The reasons for these low response rates are discussed below.

Due to the overall lack of research dealing with prevention of alcohol related harm in the workplace, there were some difficulties in identifying experts that had extensive knowledge in the area. In an attempt to work around this problem, the comprehensive critical literature review was utilised as one way of identifying experts, through the level of quality of the experts' studies and the amount of studies published between 1985 and 2005. The author is aware that this significantly reduced the number of experts in the field since it excluded experts on prevention who do not publish their work. There are individuals around the world with extensive knowledge of prevention who work practically with these issues and those have been largely excluded by the use of this sampling method (i.e., snowball sampling). This is an unfortunate result, but an outcome of practical considerations. This weakness needs to be considered in interpreting the results, and certainly limits generalisability. .

Furthermore, the lack of research in this area and the exploratory character of this study necessitated that the questionnaire aimed at the experts be designed with open-ended questions. This put extra workload on the experts participating in the survey since they had to write their own answers, and from feedback received from several experts it was determined that it took them somewhere between 20 minutes up to an hour and a half to complete the survey. When many of them already have heavy work commitments, this may have reduced the response rate. Interestingly enough, the one expert who spent an hour and a half completing the survey also indicated a willingness to provide further information if necessary.

The manager and employee surveys were affected by a number of problems that had a significant impact on the response rate and the recruitment of workplaces for

the study. In order to get an understanding of how these problems developed, some background information is provided below. When this study was initiated by Alna Riks, an organisation responsible for developing and implementing alcohol policies, in collaboration with the National Institute for Working Life, there were requests from Alna Riks to be actively involved throughout the research process. It was therefore decided to utilise the extensive membership roster of companies linked to Alna Riks, due to several reasons. Firstly, it was found convenient to use companies that were members of Alna Riks since it was assumed that would ensure availability of organisations with existing alcohol policies. Secondly, it would insure active involvement by Alna Riks since they were responsible for recruiting approximately 70 organisations to the study (1 manager and 5 employees from each organisation) from their membership roster. Thirdly, the study would indirectly be a measurement of the level of best practice in the implementation of alcohol policies by Alna Riks.

When the researcher completed the first phase of the study, the literature review, and contacted Alna Riks to initiate recruitment of organisations for the study Alna Riks responded that it had decided, without the researcher's knowledge, that the researcher was not to make any contact with membership companies as was agreed to at the beginning of the study. Instead, all contacts with potential participating organisations were to be made through representatives of Alna Riks.

This new development left the researcher in the hands of Alna Riks with regards to the recruitment process, and out of the 11 regional offices and the main Alna head office, only one, Alna Jämtland office, recruited and supplied the number of organisations that were promised (15 organisations) whilst the other regional offices supplied the researcher with none or very few recruited organisations (7 organisations in total). Furthermore, when the researcher contacted the organisations supposedly recruited by Alna Riks, it was found that some of them had not even been informed of the study, others had earlier declined to participate or had no interest in participating in the study and in one case a recruited organisation did not even have an alcohol policy.

Overall, this lead to a much smaller sample size than was initially deemed necessary in order to conduct meaningful statistical tests, and with such a low response rate the quantitative component of the study became virtually obsolete. After repeatedly contacting Alna Riks and informing the organisation about the necessity of meeting the number of organisations initially requested, no improvements were made. By this time a substantial part of the researcher's time to complete the project had passed and therefore it was deemed necessary to substantively focus on the qualitative data.

Due to the small sample size and the lack of normal distribution in the data it was determined that non-parametric tests, which are statistically weaker in strength than parametric tests, were the only meaningful statistical analysis to conduct on the available data. The small sample size meant that it was not meaningful to conduct any advanced data analysis and therefore it was impossible to make any definitive conclusions from the findings of this study.

7.6 Bonferroni correction

When conducting a large number of statistical tests on the same data set, as in this particular study, it is not uncommon to perform a Bonferroni adjustment. The Bonferroni adjustment uses an adjusted significance, or alpha, level that equals the original significance level of in this case 0.05. The reason for this relates to the fact that when conducting a large number of analyses, as may be the case in an exploratory study, the probability of finding significant results by chance increases significantly. The new alpha level is then reached by dividing 0.05 with the number of outcome measures. For example, in this study 30 different variables were compared to find associations between them. Instead of testing at the traditional significance level of .05 an adjusted alpha level was reached by using the following formula .05/30= .0017 level. This would ensure that the overall chance of making a Type I error to be less than .05 (Feise 2002; Simon 2005).

The researcher decided against conducting Bonferroni correction, for a number of reasons. Firstly, this study was exploratory in nature and it was seen as less

important to conduct this type of correction. Secondly, a Bonferroni correction could have caused a substantial loss of precision in the findings of the study. For example, when raising the bar for significance by using the Bonferroni adjustment, an outcome would be that the results were not equal for all the variables tested but it would not say which or even how many variables differed (Perneger 1998). Thirdly, due to the low sample size it was determined that a Bonferroni correction would have caused even greater problems. Conducting Bonferroni adjustment on a sample size that is too small attempts to control the probability of Type I errors but does not limit the probability of Type II errors (Simon 2005).

Perneger summarizes the main problems with the Bonferroni correction as follows.

1. *The Bonferroni method is concerned with the general null hypothesis (that all null hypotheses are true simultaneously), which is rarely of interest or use to researchers.*
2. *The main weakness is that the interpretation of a finding depends on the number of other tests performed.*
3. *The likelihood of type II errors is also increased, so that truly important differences are deemed non-significant.*
4. *Simply describing what tests of significance have been performed, and why, is generally the best way of dealing with multiple comparisons.* (Perneger 1998)p.1236

In the above sections, the study and its limitations and strengths were discussed. During this process, the researcher reflected on the different approaches this study could have benefited from and the future pathways that could be taken to expand on the findings documented in this dissertation.

7.7 Recommendations

As an exploratory study, this project cannot provide any definitive answers from which to make any bold conclusions. However, there are a number of recommendations to be made for practitioners who are planning or already working with prevention of alcohol related harm in the workplace and for future research endeavour.

Table 7.1 Recommendations for researchers and practitioners	
Recommendations for researchers	**Recommendations for practitioners**
1. In order to fully understand the complex aetiology of alcohol related harm in the workplace it is recommended that researchers apply a comprehensive approach focusing on both contextual and individual factors and not only the latter.	1. Due to the complex nature of alcohol use in workplace settings it is recommended to apply a comprehensive approach (e.g. many researchers recommend the use of health promotions as a vehicle to prevent harms associated with excessive, or problematic, alcohol use) and work with alcohol use in a organisational context.
2. Let quality research methods (e.g. reasonable sample size, case-control studies, longitudinal research, use sound statistical analysis, provide clear descriptions of what methods has been utilised and why) guide the research and use resulting outcomes, in concert with expert opinion and consumer input to design effective interventions.	2. Based on current evidence, use only interventions, programs and policies that are based upon a solid evidence base. This is currently difficult due to severe shortcomings in existing research. It is therefore recommended to utilise components that has a reasonable support in literature, from key experts and that has worked reasonably well in other work settings, based on independent evaluation.
3. This field is in imminent need of a solid evidence base, something that can only be achieved by the use of consistent quality research methodology. One example is when calculating costs associated with excessive alcohol use, at individual-, community-, organisational-, or national level, there is need to develop a consistent methodology to conduct comparative cost estimations.	3. There is sufficient evidence in current research to suggest that prevention programs should be flexible enough so that they can adjust to changing demands and the way organisations organise their work.
4. There is need for more longitudinal research in order to better determine the impact of different interventions. This, in combination with quality research methodology, is likely to have a significant impact upon the development of a strong evidence base, and the development of quality practice when attempting to prevent alcohol related harm in the workplace.	

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APPENDIX 1

R.D. = Research Design.
S.S. = Sample Size
R.R. = Response Rate (summarised without decimals)
R = Rating

1 = Very High Quality Study
2 = High Quality Study
3 = Reasonable Quality Study
4 = Poor Quality Study
5 = Very Poor Quality Study

Author	Year	R.D.	S.S.	R.R.	RR %	Key Findings	Main Shortcomings	R

Systematic Literature Review 1985 - 2004

Author	Year	R.D.	S.S.	R.R.	RR %	Key Findings	Main Shortcomings	R
Addley, K., McQuillan, P. & Ruddle, M.	2001	Cross-sectional observation and survey study.	2 595 2 139	1 393	54%	1. Almost two-thirds of participants did not engage in regular moderate physical activity, with females twice a likely not to than men. 2. Approximately one in six participants were smokers and three-quarters were found to have body fat estimations above the acceptable level, with females much more likely to be obese than men. 3. Aerobic capacity was below average in 17% of participants and was associated with increasing age, smoking in the under 35s and poor physical activity levels. 4. Excessive alcohol intake was found in 8% of all participants, and was more likely in men and smokers. 5. In the follow-up survey, 83% needed to make one or more changes to their lifestyle. Smoking was the most difficult to change, with only 14% remaining abstinent after 6 months. 6. Almost two-thirds were maintaining improved dietary habits and exercise activity, with around one-half moderating alcohol intake	1. Relative low response rate to the follow-up survey. 2. Potential sample bias due to the fact that all participants were involved in a workplace lifestyle and physical assessment program. It is possible that this could results in a sample with those positive to health related behaviour change could be overrepresented due to their willingness to participate in the program.	2

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Author	Year	R.D.	S.S.	R.R.	RR %	Key Findings	Main Shortcomings	R
						and achieving weight reduction. 7. Overall, the average level of non-attempt behaviour change was one in five (19.6%), tried but failed accounted for almost one in three (31.2%) and successful maintenance of positive lifestyle change occurred in one-half (49.2%). 8. The main conclusion is that brief lifestyle and physical activity assessment programmes are effective interventions in getting employees to modify their lifestyles. The impact this has on wider organisational issues such as absenteeism and productivity needs further investigation.		
Allamani, A. Cipriani, F., Innocenti, S., et al.	1988	Cross-sectional Survey	398	398	100%	1. Women employees drink less than men. 2. Age, civil status, education are not correlated with meaningful differences in the amount of drinking. 3. In considering the distribution of drinking according to the place of residence, we find that drinking is more rooted in the culture of non-urban residents than in city-dwellers. 4. The average per capita daily use of alcohol was 34.9g among factory employees, and	1. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use. 2. The comparison of results from the study in 1977 and the one conducted in 1983 compares data that are based on different criteria. The first study is a population study while the latter	3

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						87.9g among agricultural workers. 5. Wine was the most commonly used beverage. 6. In the factory, workmen drink significantly more than clerks. 7. There is a drinking culture that is more rooted in the country than in urban areas. 8. No other significant relationship was found between drinking pattern and work features.	draws its data from two work areas. 3. The sample proportion of the 1977 study is based on sex and age while the 1983 study is proportioned by work sectors and roles. 4. There is a lack of gender balance in the latter study which would reflect the small number of women in the workforce. Point 2-4 has been raised by the authors. 5. The cross-sectional study design make it impossible to draw any conclusions regarding causality .	
Alleyne, B.C., Stuart, P. & Copes, R.	1991	Case study w. record data.	?	459	?	1. Forty workers tested positive for alcohol. Of these 16 (4.3%) had alcohol levels greater than 80mg/100mL; the legal limit for driving an automobile in Alberta. Of the remaining 24 (6.4%) cases, 18 had alcohol levels of 10mg/100mL or less. Although very low levels are reported as positive, it is possible that in some instances the alcohol could be the result of post mortem fermentation and not alcohol	1. A relative small sample. 2. As mentioned by the authors, this study only investigated cases were the intoxicated worker were killed. It is possible that cases were the worker tested negative for alcohol was killed in an accident caused by an intoxicated colleague.	3

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						consumed by the worker. 2. Evidence of alcohol use was found in a higher percentage of fatalities due to motor vehicle accidents, falls, and being caught in or under equipment than other types of workplace fatalities. 3. When accidents where alcohol was present were compared with those without alcohol a statistically significant difference was found.		
Ames, G.M.	1993	Review	N/A	N/A	N/A	1. From the perspective of primary prevention, alcohol problems in the workplace are defined in much larger scope than those that result from a few chronic drinkers. Alcohol problems are defined not only as those that are costly to the employer, but also as those that are costly to the employee. In worksites where drinking occurs, or where employees goes to work after drinking, all employees are put at risk for possible negative consequences of drinking. 2. Over the past 15 years, and based on findings from studies of various occupational settings, researchers have contributed to the development of a theoretical approach for organising a number of isolated and interacting alcohol-related risk factors in the	1. The lack of descriptions regarding methods used to find and include articles in the review. A shortcoming shared by the vast majority of reviews included in this review.	

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						workplace. Conceptual categories for organising risk factors include social control of workplace drinking, physical and social availability of alcohol, and quality of work life. In terms of relationship to employee drinking practices, the relative weight of each of these factors differs among occupational settings and job categories. 3. Studies have shown that social control issues are especially important as elements of work that influence drinking patterns. Findings from ethnographic and combined ethnographic and survey studies reveal how the absence of clear, unambiguous alcohol policy and the inability to effectively implement disciplinary action against alcohol rule breakers influence the formation of drinking subcultures in various occupational settings. 4. The level of social and physical availability of alcohol is emerging in the research literature as a risk – or protective – factor in the context of workplace culture. The degree to which the workplace culture encourages, shapes, or discourages drinking is complex. So much so that the environmental characteristics of drinking present formidable obstacles for		

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						employers who seek to attain an alcohol-free workplace or to develop a proactive approach to alcohol in the workplace.		
Ames, G.M. & Delaney, W.	1992	Cross-sectional survey in combination with ethnographic methods.	984 50 intervj.	748	76%	1. Union leaders in the study plant repeatedly stated that in their view, alcohol problems are health problems and therefore not subject to discipline. That belief is enforced by the shop steward who will commonly file a grievance based on circumstances surrounding confrontation of the employee who is accused of breaking the alcohol rules. 2. One of the foremen avoided disciplinary action knowing that the process of carrying out such action may create more and different kinds of problems directly affecting her own performance rating and stress level. 3. Union and management's agreed upon policy for handling alcohol and drug-related problems are documented in their national contract. However, the contract policy does not provide guidelines for what constitutes alcohol problems that warrant treatment versus those that warrant disciplinary action. The lack of clarity on these important issues takes that decision out of the hands of	1. The cross-sectional study design limits the possibility to determine direction of causality. 2. The use of self-reported drinking data is a potential source of bias. 3. Data comes from one workplace and this might limit the representativeness of the study	2

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						supervisors and into the realm of EAP diagnosis or the union grievance system. 4. These survey findings from the general plant population sample corroborated evidence drawn from the ethnographic interviews that alcohol policy is confusing and in the main, ineffective. Findings from both the survey and ethnography show that supervisors and union leaders are not likely to take action against drinking, or if they do, that it will prevail. The extent to which ambivalent policy and interacting organisational agendas influence the supervisor's perceptions on drinking norms, practices and action is illustrated by the foreman's comments about disciplinary action		
Ames, G.M., Delaney, W. & Janes, C.	1992	Cross-sectional survey in combination with ethnographic methods.	984 50 intervj.	748	76%	1. A high percentage of union leader respondents (84%) expressed belief that a policy exists, but are uncertain of where it is documented. 2. Regarding management and union intervention in drinking on the job, 69% of the hourly workers and 48% of the salaried replied that is it likely a supervisor would do nothing or just talk to the employee and not take	1. The cross-sectional study design limits the possibility to determine direction of causality. 2. The use of self-reported drinking data is a potential source of bias. 3. Data comes from one workplace and this might limit the representativeness of the study	2

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						other action if someone under his or her supervision was seen drinking on the job occasionally. Many workers (73% hourly and 90% salaried) replied that they disagree or strongly disagree that their union does a good job of preventing drinking in the plant. Among management, 77% agreed, along with 55% of hourly, that there is not much a supervisor can do to stop employees from on-job drinking. A large percentage (76% hourly and 93% salaried) further agree that receiving disciplinary action for drinking only means it will probably be reversed later through grievance procedures.		
Ames, G.M. & Grube, J.W.	1999	Cross-sectional survey in combination with ethnographic methods.	1 300	984	76%	1. Structural equations modelling of the survey data revealed that subjective social availability of alcohol at work, and particularly perceived drinking by friends and co-workers, was the strongest predictor of work-related drinking. 2. Subjective physical availability was not significantly related to drinking at or before work. 3. The strongest predictors of work-related drinking were beliefs about drinking of co-workers and workplace friends.	1. The cross-sectional study design limits the possibility to determine direction of causality. 2. The use of self-reported drinking data is a potential source of bias. 3. Data comes from one workplace and this might limit the representativeness of the study results.	2

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						4. Respondents' beliefs about approval or disapproval of drinking at work did not predict drinking before or during work hours after other factors were controlled. 5. The ethnography provided additional support for the survey findings on the importance of drinking by friends and co-workers. Many of the people who drank during work hours had friends or co-workers who also drank in work circumstances.		
Ames, G.M., Grube, J.W. & Moore, R.S.	2000	Cross-sectional survey in combination with ethnographic research methods.	1 462	984	76%	1. At the Traditional plant, both male (23%) and female (26%) respondents were significantly more likely to report drinking alcohol during work hours than were their Transplant counterparts (3% for both men and women). 2. In contrast to work-related drinking, more of the respondents from the Transplant site reported overall drinking in the previous year. The overall drinking prevalence rates were 72% for Traditional plant men, 80% for Transplant plant men, 81% for Traditional plant women and 77% for Transplant plant women. 3. The Bivariate analyses indicated that the two	1. The cross-sectional study design limits the possibility to determine direction of causality. 2. The use of self-reported drinking data is a potential source of bias. The authors themselves acknowledge the following shortcoming. 3. One limiting aspect of the present study is that it focused on only two worksites; this limitation was necessary, however, to allow for in-depth	2

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						plants differed on all of the perceived social control measures. For example the Transplant workers reported being more likely to be caught if they: (1) drank in the plant; (2) were drunk at work; (3) drank in the parking lots; (4) drank just before work. Transplant respondents were also more likely than their Traditional counterparts to report that it would be likely or very likely that they would be disciplined or referred to the EAP program if they drank occasionally at work. 4. A greater percentage of Traditional respondents than Transplant respondents reported that it was easy or very easy to: (1) get alcohol at work if they wanted; (2) drink at their work station; (3) drink during lunch breaks; or (4) bring alcohol into the plant. 5. Workplace norms regarding alcohol use were also more permissive in the Traditional plant. A greater percentage of Transplant respondents, as opposed to Traditional respondents, also expected disapproval for drinking at work from: (1) their best friend; (2) other work friends; (3) team mates and (4) supervisors. Significant gender differences were obtained for other friends' disapproval,	ethnographic work.	

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						team-mates disapproval and supervisor's disapproval. In all three cases, women perceived greater disapproval for drinking at work than did men. None of the plant by gender interactions were significant.		
Ames, G.M., Grube, J.W. & Moore, R.S.	1997	Cross-sectional survey in combination with ethnographical research.	4 800	832	17%	1. Bivariate analyses indicated that overall drinking, heavy drinking outside of work, drinking at or just before work and coming to work hungover were related to the overall number of work problems experienced by respondents, and to specific problems such as conflicts with supervisors and falling asleep on the job. 2. Multivariate analysis revealed that workplace drinking and coming to work hungover predicted work related problems even when usual drinking patterns, heavy drinking and significant job characteristics and background variables were controlled. 3. Overall drinking and heavy drinking outside the workplace did not predict workplace problems in the multivariate analysis. 4. The analyses show that workplace problems were also related to age, gender, ethnicity, work shift and departments.	1. It unclear if the initial sample consisted of 4 800 employees but if that was the case then the response rate is very low and that would really question the representativity of the results, even within the plant.	3

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						5. The overall conclusion is that although the relationships are modest, they support the hypothesis that work-related drinking and hangovers at work are related to problems within the workplace and may lead to lowered productivity and morale		
Ames, G.M. & Janes, C.J.	1992	Review	N/A	N/A	N/A	1. Currently, the dominant approach to alcohol problems in the workplace considers the primary area of employer responsibility to be the treatment of alcohol-impaired individuals. However, a growing body of research suggests that this approach, while critical to employees who are alcoholics, is incomplete. Individuals, treatment oriented approaches may be of little benefit for workers who are not alcoholics but whose drinking pattern place them or others at high risk for alcohol-related problems, such as accidents, injuries, or automobile crashes coming to and from work. As public health researchers have long maintained, preventing problems from occurring, or reducing the risk of their occurrence, is a far more defensible strategy than the "downstream" approach of treating problems after they have already happened.	1. The lack of descriptions regarding methods used to find and include articles in the review. A shortcoming shared by the vast majority of reviews included in this review.	

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						2. Each work setting may have a unique culture and all workplace cultures possess a set of rules, or norms, regarding appropriate behaviour, as well as procedures for instituting these norms through behavioural regulation and handling of these offences. 3. By describing cultural dimensions of work-related drinking – and the way they are linked together – we identify environmental risk factors for the development of drinking subcultures and alcohol related problems. 4. The normative system (informal and formal) has been found to have various effects on individuals. For example a new employee may feel forced to participate in Friday drinks or after-work activities to be able to become a member of the workgroup, and as such increase their alcohol use. 5. When talking about availability to alcohol research see this in two different ways, physical and social availability. The physical availability is governed by how easy it is to access alcohol in and in association with the workplace. Social availability refers to how one's friends use of alcohol affects one's own drinking.		

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						6. The way in which work is organised and the quality of worklife compose the second dimension important to a cultural approach to workplace drinking behaviour. Alcohol researchers have suggested that stress and alienation at work - based on how tasks are assigned, accomplished, and supervised – together with the general physical and social environment, may influence work-place drinking levels. 7. Drinking at work cannot be related solely to the work environment, although that environment may influence such behaviour profoundly. For this reason, the third dimension of work culture considers drinking patterns in relation to the interaction between work and non-work life, and emphasises the interaction of factors external to the workplace with the demands of work itself.		
Ames, G. & Janes, C.R.	1987	Cross-sectional survey.	2 200	207	9%	1. The social organisation of the workplace, including the important factors or job alienation, job stress, inconsistent social controls, and the evolution of a 'drinking culture' is implicated by this research to be the primary vehicle for promoting high levels of	1. Very low response rate. One reason for this was highlighted by the authors as being related to the fact that they only asked married couples with at least one child living at home. This	4

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						alcohol use. 2. Although the role of the workplace in encouraging certain alcohol behaviours was predominant, the data suggest that it alone may not be sufficient for causing alcohol problems. In particular, the central importance of drinking in work-related social contexts and the relative permissiveness of the work environment was found to promote heavy drinking among individuals who were of socio-cultural backgrounds where heavy drinking was permitted or even encouraged; reported a lack of effective male role models when growing up; and restricted leisure activities to male-oriented peer groups most often met through work-related contexts. 3. Conversely factors that appeared protective of developing high-risk drinking patterns were family religious involvement, and participation of fathers in non-work related social groups that usually involved their wives and children	design makes it very difficult to determine the actual response rate.	
Ames, G. & Rebhun, L.A.	1996	Review	N/A	N/A	N/A	1. Survey data on the prevalence of drinking-related problems among employed women are fragmented, inconsistent and difficult to compare or summarise.	1. The lack of descriptions regarding methods used to find and include articles in the review. A shortcoming shared by	

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						2. Too frequently, gender differences in occupational influences on drinking practices and problem drinking are not clearly specified. 3. Women entering formerly all-male work environments appear to be influence by workplace drinking norms. However, the drinking norm risk needs to be more clearly delineated and more attention needs to be paid to influences of cultural factors outside the workplace, in particular influences of socio-economic and family norms. 4. Factors such as workplace stress and socialisation to workplace drinking practices need to be explored in comparison with family influences. Are high females drinking rates a result of psychosocial pressure at work, social pressure outside of work, or a combination of these. 5. The data on relationships among women, work, ethnicity and drinking behaviour are understudied. 6. It appears that women's drinking in specific ethnics groups increases slightly with level of acculturation and entry into more culturally diversified workplaces. 7. In addition - and regardless of ethnic	the vast majority of reviews included in this review.	

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						background – alcohol attitudes and behaviours of employed and underemployed women may be adversely affected by lower socio-economic status, both because drinkers react to the despair and anomie of poverty and discrimination, and because lower status groups may be targeted for both advertising campaigns and oppressive legislation.		
Anderson, A., Johnson, G.D., Gerald, L.B. et al.	1995	Cross-sectional survey.	780	635	81%	1. Approximately one-third of businesses have formal policies and train managers in AOD issues, about one-forth educate employees, one-fifth use some form of drug testing, and about one-tenth have EAP's. 2. In contrast to the percentages of businesses, the estimates for the percentage of employees who work for employers with AOD policies/procedures is substantially higher. This is of course true because large employers are especially likely to have implemented such policies/procedures. 3. Businesses with a history of financial investment in employees, as measured by the presence of a health insurance benefit, are more likely to have policies and all AOD procedures.	1. The study sample consists solely of employers, therefore it is impossible to determine the transfer of policies out to the employee group. It is possible that employers feel that they are providing sustainable and well defined policies. It is a totally different matter if employees know what the policy are and this will to some extent determine the potential impact of the policy.	2

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						4. African-American owned businesses are less likely than non African-American businesses to have a policy or to have drug testing. Businesses experiencing a greater number of employee problems are more likely to have a policy, to have an EAP, and to test employees. Perceptions of widespread AOD use are associated with policies, employee education, EAPs and drug testing. Perceptions of a serious AOD problem are associated with policies, EAP and testing. 5. Net of other business characteristics, companies with an employee health insurance benefit, in sectors other than retail and services, owned by non-blacks, and which are large are more likely to have adopted a policy. With its regression coefficient ratio greater than seven times the size of the standard error, insurance benefit has an especially large effect on drug policy implementation. 6. Once other business characteristics are controlled, however, we see a greater willingness of African-American owned businesses to educate employees than would be the case of similarly positioned non-minority businesses.		

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						7. The most powerful predictor is type of industry with the service and retail sectors substantially less likely to test employees. In addition, companies with health insurance benefits, which perceive a serious AOD problem, and which employ more workers are more likely to test.		
Anderson, B.K. & Larimer, M.E.	2002	Case-control study.	458	155 Case (*N*=82) Control (*N*=73)	34%	1. Within the sample , 66.3% of the men (*n* = 65) and 73.7% of the women (*n* = 42) drank on at least one occasion during the month before the baseline assessment. This is higher than the rates reported in the National Household Survey on Drug Abuse, which indicate that 58.2% of men and 45.1% of women of those surveyed drank in the past month. 2. Although the average number of alcohol-related problems experienced during the 3 months prior to assessment was low (*M* = 4.84, *SD* = 6.49), only 29.1% of the participants who provided data (*n* = 30) reported no alcohol-related problems at all. The five most frequently reported problems were (a) having a hangover or feeling bad after drinking (48.6%), (b) driving a motor vehicle after having three or more drinks (42.5%), (c)	Several limitation of this study has been pointed out by the authors. 1. A limitation of the present study was that all of the drinking outcome measures were based on participant self-report, which holds the potential for bias. 2. The small sample size and the possibility that a sampling bias occurred, leading to overestimation of actual drinking rates and negative consequences, limits the generalisability of the outcome analysis. 3. Another limitation of the current project was that employees within the	4

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						saying or doing embarrassing things while drinking (28%), (d) smoking tobacco more when drinking (25.2%), and (e) taking foolish risks when drinking (25.2%). 3. Female problem drinkers were more likely than male problem drinkers to benefit from the intervention in terms of reporting a more significant reduction in negative consequences over time. 4. There were no significant interactions, suggesting that the preventive interventions are equally effective across gender and with both problem and non-problem drinkers.	organisation were randomly assigned to condition within the same worksite, and the potential for contamination between groups did exist. 4. The delivery of the intervention program by two women of similar age and race was a weakness in the evaluation of moderators of intervention efficacy. 5. No evaluation of important worksite cost-related outcomes, such as health care utilisation, absenteeism rates, job performance ratings, turnover, and reported absenteeism.	
Barrett, G.F.	2002	Cross-sectional population survey.	?	5 705	?	1. Treating drinking status as exogenous, and entering separate dummy variables indicating abstention and heavy drinking into a standard earnings equation, indicated that earnings increased with greater levels of alcohol consumption. 2. However, allowing for the endogeneity of drinking status due to the effects of income	1. Unclear response rate makes it difficult to determine the representativeness of the present study. The study sample is relatively large and therefore the study receives a 3 in rating.	3

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						and unobservable on alcohol consumption levels revealed a significant positive earnings premium for moderate drinking and a substantial penalty for heavy drinking. These effects of alcohol on earnings were masked in the raw data by worker self selection of drinking status. 3. Estimates of the selectivity corrected earnings functions were consistent with the health-productivity-earnings nexus suggested by the medical literature on the effects of alcohol consumption patterns.		
Bell, N.S., Mangione, T.W., Howland, J., et al.	1996	Cross-sectional survey.	9 184	7 255	79%	1. Fully 80% of managers say their lack of training of confronting employees with performance problems hinders their efforts to deal with alcohol-abusing employees, and nearly three-quarters say that alcohol abusing employees are often performing adequately. 2. The second most serious obstacles arise from Interpersonal Factors – the power of subordinates, or in some cases of their union representatives, to impose costs on supervisor who intervenes. Organisational Factors do not loom as large, but one-fifth of the managers still perceived these to present “moderate” to	The authors have raised a couple of limitations of the present study. 1. Although the data suggest that significant obstacles to initiating interventions exist, the study design does not allow causal inference to be made. The data are cross-sectional and the sample – although it is large and broad – is not the result of a random selection across all industries. The corporations included for analysis are all large	2

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						"major" barriers, and nearly 60% cite company softness on alcohol problems relative to drug use as hampering their efforts. 3. Managers at large sites are much more likely to say they face Interpersonal obstacles, and a little more likely to feel limited by Individual Inadequacies. 4. Managers at the white-collar sites – financial and insurance companies, headquarters, and research and development facilities – perceive generally fewer barriers. 5. The results show a clear relationship with a manager's position in the hierarchy: the lower a manager is in the hierarchy, the more likely he/she will report all three types of barriers. 6. Those with primarily male direct-reports encounter more Interpersonal obstacles, but those managing workgroups with a majority of women are a little more likely to perceive constraints related to Organisational priority or Individual inadequacy. 7. Female managers supervising primarily male subordinates faced the greatest level of interpersonal and individual barriers. Female managers supervising female workers, followed by female managers supervising	and worksites selected from within the corporations are medium to large. Thus, findings are probably most relevant to bigger organisations and less so to small businesses.	

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						primarily male workers, experienced the greatest organisational barriers. Male managers supervising primarily female workers experienced the lowest level of perceived barriers of all types. 8. Manager's who perceive more serious alcohol problems at their worksites, and those who have actually made an alcohol-related intervention, are considerably more likely to report barriers of all types. 9. Among those who see serious worksite alcohol problems, experience with interventions is not associated with the perception of barriers, but among those who see fewer problems, experience leads to significantly higher reports of obstacles. 10. Linear associations exist between the perception of barriers and the likelihood of disciplining under various scenarios. Managers perceiving the greatest number of Individual barriers are *more* likely to say they would use discipline than EAP referral or informal methods when an employee are caught drinking on the job (without performance deficit) or has a performance deficit related to a hangover than are managers who perceive		

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						relatively few Individual barriers. However, managers perceiving the greatest Individual barriers are *less* likely to discipline employees in more ambiguous drinking situations: for example, when an employee drinks at lunch and shows up with alcohol on his/her breath but exhibit no performance deficit. 11. In contrast, the more serious the Organisational barriers are, the *less* likely a manager is to discipline in these cases and the more likely he/she is to handle the problem informally of through EAP referral.		
Bennett, J.B. & Lehman, W.E.K.	2000	Review	N/A	N/A	N/A	1. Recent changes in workplace organisation and policies gave also influenced the work group in ways that pertain to prevention. First, through downsizing or restructuring many organizations have increased non-hierarchical management, placing more shared responsibility in hands or workers (e.g., empowerment and total quality management). As agents of policy, supervisors have traditionally been trained to refer employees to get help for problems. However, interdependent work may increase the need for and impact of informal sanctions against		

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						deviant coworkers. Coworkers may encourage a trouble employee to seek help especially when the loss or firing of their colleague results in an increased workload. Second, many employers now test for alcohol and drugs. Testing increases privacy concerns, but most employees tend to favor testing, especially in jobs involving safety, contact with the public, or when previously exposed to co-worker use. These findings suggest policies acquire meaning in the context of work behaviour. Increased surveillance in teams may also cause stress. Workers may have less time alone, face ambiguities associated with decentralisation, and share increased responsibility for co-workers behaviour. 2. Various findings suggest that workplace psychosocial factors influence alcohol and drug use by employees, the negative effect of such use on co-workers, and employee response to policies. Psychosocial factors include (1) workplace environment, (2) group processes, (3) perceptions and tolerance of co-workers who use alcohol or drugs, and (4) attitudes toward policy. Problematic substance use leads to the need for policy,		

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						which develops to control or regulate problems. However, organisations, groups, and individuals influence such regulations. These factors may be viewed along a continuum of macro-organisation influences (work environment) to micro-organisation influences (attitudes). Studies on workplace environment examine broad, systems-level processes within occupations and work cultures that also influence groups. Studies on group processes focus on employee perceptions of the work group as well as the ways that employees condone co-workers substance use. Other research focuses on individual perceptions/attitudes (of co-workers and policy). 3. Job characteristics such as low decision latitude, low job autonomy, and repetitive or stressful work also correlate with problem drinking. Interestingly, social support may form to deal with these job qualities such that employees drink together to cope, show solidarity with co-workers, or engage in joint leisure. These “drinking climates” entail social drinking and attitudinal support for drinking. Studies demonstrate that drinking climate		

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						correlates with exposure to co-worker drinking and related problems for other employees. 4. Several authors have advanced the concept of organisational health or wellness. Broadly defined, organisational wellness has two components: healthcare benefits and a work culture that supports healthy lifestyles. Healthcare availability and policies that enable appropriate referral and medical/behavioural care (including treatment for substance abuse) characterise healthy workplaces. Healthy work cultures emphasise employee involvement, family friendly policies that promote work-life balance (e.g., child care), peer support, and positive flow of communication. 5. Teamwork or group cohesiveness may be especially important for prevention. A growing body of evidence suggests that teamwork or organisational participation is associated with a decreased likelihood of alcohol problems or drinking climates.		
Bennett, J.B. & Lehman, W.E.K.	1999a	Cross-sectional survey.	937	764	82%	1. The results indicate that control variables accounted for 23 to 24% of the variance in the criteria. Examination of β weights reveals that	The authors have raised a couple of reservations that has to be taken into account when analyzing the	3

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						the organisational commitment was the strongest predictor for all criteria. This was the only consistent predictor from among the control variables and showed that employees with greater job commitment were more likely to experience higher levels of teamwork, customer orientation and empowerment. Self-efficacy was also positively related to teamwork and customer orientation. 2. The results confirm the hypothesis that, independent of contextual variables, both general stress and exposure to problem co-workers are negatively associated with a work climate conducive to the practice of quality principles. 3. Consequences of substance abuse were also predictive of less teamwork, exposure to harassment was negatively related to customer orientation, and job strain was negatively associated with empowerment.	results. 1. The current findings were based entirely on self-reports at a single point in time, and cannot be used to make inferences about causation (e.g., behavioural problems impact TQM effectiveness).	
Bennett, J.B. & Lehman, W.E.K.	1999b	Cross-sectional survey.	2 137	1 528	72%	1. Results indicate that the work environment – as represented by group composition – has a more significant role to play in workplace substance use than previously described. 2. Current findings indicate that group	Several limitations in the present study was raised by the authors themselves. 1. The study relies on self-reported drinking data a source known to	3

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						occupational structure may be an important factor in determining whether employee substance use will lead to problems for others. In two samples, we found that work groups moderated the degree to which exposure to co-worker substance use is predictive of negative consequences. 3. Employees were more vulnerable to the effects of co-worker substance use if they were members of work groups with particular characteristics, regardless of their own attributes. The chief characteristic of such groups is a higher proportion of jobs involving some risk. 4. Although the amount of variation accounted for was small, groups with social climates that included drinking also showed stronger relationships between exposure and consequences. 5. Importantly, the moderating effects of drinking climate remained significant when risk involvement was also included as a predictor. 6. As current findings suggest, individuals may experience stress from others' substance use. It is possible that because policy focuses on	increase the risk of underreporting alcohol use. 2. The cross-sectional study design causes problems when trying to determine causality between two variables (e.g., work environment and alcohol use). 3. The consequence measure did not have any time reference and therefore it is possible that there might be some discrepancy between consequence and exposure. 4. The present study only focus on groups vulnerability to problems but such liabilities may be caused by higher level organisational factors. 5. Caucasians and American-Mexicans are treated as homogenous variables.	

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						individual control, co-workers' feel an extra burden when they are aware of deviance or feel that they have to pick up the slack. We recommend that workplace awareness programs discuss and address these potential stresses whenever policy (implicitly or explicitly) assigns co-workers as agents of social control.		
Bennett, J.B. & Lehman, W.E.K.	1998	Cross-sectional survey.	2 393	1 777	74%	1. In each sample, drinking climate correlated with stress and withdrawal more so than did reports of individual drinking. 2. Drinking climate and individual job stress was negatively associated with cohesion. 3. ANCOVA results indicated that drinking climate combined with low cohesion resulted in increased vulnerability for all five problems. 4. Cohesion appeared to attenuate the negative impact of exposure to drinking norms. 5. The main conclusion is that as many as 40% of employees report at least one negative consequence associated with co-worker substance use (alcohol and drugs).	The authors have raised some concern regarding a couple of limitations of the present study. 1. Although cross-sample similarities are encouraging, the samples were from similar organisations and the same region of the country. 2. Assessment were entirely self-reports from structured questionnaires and thus subject to personal bias and common method variance. 3. A related limitation concerns the items used in some of the current measures. First, the cohesion measure were	2

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							interpreted as associated more with the task-commitment than the group attraction aspects of group cohesiveness. 4. The stress measure was comprised of a few items that did not distinguish between different dimensions of job stress. 5. The cross-sectional design that makes it impossible to draw inferences about casual relationships.	
Bennett, J.B., Lehman, W.E. & Reynolds, G.S.	2000	Review	N/A	N/A	N/A	1. Recent changes in workplace organisation and policies have also influenced the work group in ways that pertain to prevention. First, through downsizing or restructuring, many organisations have increased non-hierarchical management, placing more shared responsibility in the hands of workers (e.g., empowerment and total quality management). As agents of policy, supervisors have traditionally been trained to refer employees to get help for problems. However, interdependent work may increase the need		

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						for and impact of informal sanctions against deviant co-workers. Co-workers may encourage a troubled employee to seek help especially when the loss or firing of their colleague results in an increased workload. 2. Many employers now test for alcohol and drugs. Testing increases privacy concerns, but most employees tend to favour testing, especially in jobs involving safety, contact with the public, or when previously exposed to co-worker use. These findings suggest policies acquire meaning in the context of work behaviour. Increased surveillance in teams may also case stress. Workers may have less time alone, face ambiguities associated with decentralisation, and share increased responsibility for co-worker behaviour. 3. Various findings suggest that workplace psychosocial factors influence alcohol and drug use by employees, the negative effect of such use on co-workers, and employee response to policies. Psychosocial factors include (1) workplace environment, (2) group processes, (3) perceptions and tolerance of co-workers who use alcohol or drugs, and (4) attitudes toward policy. Problematic		

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						substance use leads to the need for policy, which develops to control or regulate problems. However, organisations, groups, and individuals influence such regulation. These factors may be viewed along a continuum of macro-organisation influences (work environment) to micro-psychological influences (attitudes). Studies on workplace environment examined broad system-level processes within occupations and work cultures that also influence groups. Studies on group processes focus on employee perceptions of work group as well as the ways that employees condone co-worker substance use. Other research focuses on individual perceptions/attitudes. (of co-workers and policy). 4. Job characteristics such as low decision latitude, low job autonomy, and repetitive or stressful work also correlate with problem drinking. Interestingly, social support may for to deal with these job qualities such that employees drink together to cope, show solidarity with co-workers, or engage in joint leisure. Studies demonstrate that drinking climate correlates with exposure to co-worker		

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						drinking and related problems for other employees.		
Bertera, R.L.	1991	Cross-sectional Survey	?	45 976	?	1. There was a statistically significant excess of illness days for high risk compared with low risk participants for each of the seven (current smoking, excess alcohol intake, obesity, elevated cholesterol, high blood pressure, inadequate seatbelt use and lack of exercise) behavioural risks. 2. High-risk employees had the following mean excess illness days for each risk after controlling for age, education, and pay class as well as the six other behavioural risks (excluding the one being used as the independent variable): smoking, .90 days; excess alcohol intake, .37 days; obesity, .36 days… 3. Smokers incurred an average excess of $960.04 in illness costs each year compared to non-smokers, alcohol also yielded a statistically significant average excess costs compared with lower risk workers of $388.86. 4. Excess illness days and illness costs per person serve as indicators of the average burden for employees who have each of the seven	1. This study utilises a cross sectional study design and therefore it is not possible to determine causality. 2. The author has raised some caution about a couple of limitations of the study. First, the cost model used company averages to prorate compensation, health-care claims and other benefit costs fore each study participant. 3. The study relies on self-reported data and this has through research been found to increase the risk of underreporting. This could also, as raised by the author, weaken the association between absenteeism and behavioural health risks and thus underestimate the cost of behavioural risk factors. 4. Unclear response rate but a very	3

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						behavioural risk factors.	large sample.	
Brooke, P.P. & Price, J.L.	1989	Cross-sectional survey.	774	577 Survey 1 425 Survey 2	74% 55%	1. Results indicated that multivariate relationships between absenteeism and its determinants did not differ significantly for males or females, or across the three occupational groups in the workforce. Similar tests evaluated the possibility of interactions between the determinants and health status, kinship responsibility and organisational permissiveness. 2. Among the hypothesised determinants of job satisfaction, significant negative net effects of routinisation (-0.434), centralisation (-0.148) and role ambiguity (-0.390), and a significant positive effect of work involvement (0.170), supported relevant hypothesis of the model and accounted for 55.1% of the variance in job satisfaction. 3. Significant positive net effects on absenteeism were observed for kinship responsibility (0.306), organisational permissiveness (0.212) and alcohol involvement (0.165).	1. Sample size not entirely clear, some 30 individuals lost in the process. 2. The cross-sectional makes it very difficult to determine direction of causality. 3. Relative small sample size and low response rate would negatively affect the representativeness of the survey results.	4
Chen, P.Y. &	1992	Cross-	792	400	50%	1. All stressors except workload were correlated	1. Relative low response rate raise	3

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Spector, P.E.		sectional survey.				with aggressive acts (i.e., sabotage, interpersonal aggression and hostility and complaints), theft and intention to quit (r = .10 to .50, mean = .31). 2. With regard to workload, it was significant but only modestly related to hostility and complaints, and intention to quit. 3. None of the stressors were related to substance use at work. Only role ambiguity and situational constraints were significantly related to absenteeism, but with small magnitude. 4. Feelings of frustration and stress about jobs were significantly correlated with interpersonal aggression, hostility and complaints, and intention to quit. 5. Anger and job satisfaction were significantly related to all behaviours except substance use at work. 6. Substance use at work was correlated with sabotage, hostility and complaints, theft and intention to quit. 7. Theft was correlated with all behaviours except absenteeism. 8. Absenteeism was only slightly related to	questions regarding the representativeness of the results. 2. The cross-sectional study design makes it impossible to determine direction of causality. 3. The use of self-reported drinking data is a well know source of potential bias in form of underreporting alcohol use.	

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						interpersonal aggression, and hostility and complaints. 9. All aggressive acts, intention to quit and theft were highly inter-correlated		
Cook, C.C.H.	1997	Review	N/A	N/A	N/A	1. Aviation accidents due to alcohol consumption appear to be rare, especially in commercial aviation. However, a small proportion of general aviation accidents are attributable to alcohol use aircrew, and aircrew are not well informed about the metabolism of alcohol and its effects on performance. 2. There is evidence that aircrew performance may be impaired by alcohol consumption even after their Blood Alcohol Concentration has returned to 'zero'. Accidents caused by impairment of aircrew performance by alcohol may therefore not be attributed to alcohol at all.		
Cook, C.C.H.	1997	Cross-sectional survey.	196	92	47%	1. 76 companies had written alcohol policies which can be divided into three categories: A) Policies governing quantity or timing of alcohol consumption to flight; B) Policies governing the context of alcohol possession or	The author raise concerns regarding a couple of limitations of the present study. 1. The response rate is low. 2. Unfortunately, data concerning	4

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						consumption, and; C) Policies that govern impaired performance attributable to alcohol consumption. 2. 18 airlines indicated that they had an alcohol and/or drug screening program for aircrew.	the fleet size, annual numbers of passengers and annual tonnage of freight transported were not readily available for the majority of airlines. It is therefore not possible to make calculations concerning the extent to which various policies apply to the total numbers of international commercial aircraft, or passenger/freight transported.	
Cook, R.F., Back, A. & Trudeau, J.	1996a	Pretest-posttest experimental design.	355	108	30%	1. The program group showed decreases on two of the three alcohol consumption measures, relative to the control groups The Program Group reduced the average number of days in the past 30 days on which they had a drink from 7.9 to 4.1, whereas the two Comparison Groups showed little or no decrease on this measure ($F = 5.19$, $p = .008$). There was also evidence that the Program Group reduced the average number of days on which they drank 5 or more drinks on one occasion. Although the overall effect was not significant ($F = 2.33$, $p = .105$), the contrast between the Program Group and the Off-Site Comparison Group was	1. Study relies on self-reported drinking data, a source found to be affected by underreporting bias. 2. Data comes from one industry and might therefore not be applicable to other workplace settings. The authors themselves have raised some concern about a couple of shortcomings in the present study. 3. Despite the numerous effects demonstrated by the field test, only very short-term effects	4

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						significant (t = 2.15, p = .035). There were no differences among the three groups on the number of drinks consumed on drinking days (F = .55, p = .58). Program effects on these three measures of alcohol consumption combined were assessed by multivariate analysis of variance, showing significant program effect on the combined index of alcohol consumption (Pillais' trace = .18, F = 2.27, p = .04). 2. There were no overall significant differences among the groups of either of the two scales measuring the frequency of problem consequences of drinking in one's personal or work life. 3. No significant differences were found among the groups on either the Health Control Scale or the Drinking and Health Scale. 4. It was also found that neither gender nor education displayed a significant main effect or interaction effect on any of the measures of drinking behaviour or motivation. Therefore, it is doubtful that observed effects on these measures were due to the group differences in gender or education.	were demonstrated. Since there were no additional posttests beyond the one administered at the conclusion of the program, there is no evidence that the demonstrated effects were sustained. 4. Although the program demonstrated substantial initial impact on the drinking behaviour and motivation of participants, most of the employees who were invited to participate declined to do so. The low participation rates among all employees and among men in particular may also be attributable in part to the overall lack of managerial and organisational support for the program.	

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Cook, R.F., Back, A. & Trudeau, J.	1996b	Pretest-posttest experimental design.	?	371	?	1. Statistically significant differences between the two groups were found on changes on measures of Health Control and Work Control. The program group in creased on both measures (respectively, while the control group did not significantly change on either measure. 2. On the measure of Health Efficacy, the program group and the control group did no differentially change, but the simple effect test of the program group's change from pre-test to post-test was significant. 3. The control group showed a significant decrease in Health Lifestyles, while there was no significant change in the program group. Changes in the Health Lifestyles Index were influenced by gender as well as participation in the program: males in the program showed the most improvement. 4. On the measures on Number of Drinks per week and Frequency of Heavy Drinking there were no significances between the two groups. 5. The groups showed differential change on the Desire to Reduce Drinking, a result of an increase by the program group coupled with a	1. Unclear sample procedure and used sample was not a random sample. This would have affected the representativeness of the study and it might also affect the normal distribution of responses. 2. A shortcoming mentioned by the authors is: 3. The quasi-mandatory nature of the program – employees were told to attend the program by their supervisors – probably heightened initial participation, but likely dampened the demonstration of effects.	4

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						decrease in the control group. The simple effects tests of change from pre-test to post-test within each group were not significant. 6. On the measure of Drinking Problems, the program group and the control group displayed significantly different change. However, the differential change was attributable to a decrease by the control group rather than the program group, which did not change. Also, this measure showed a complex effect of gender and education along with the program, as the less educated males in the program group reported the greatest increase from pre-test to post-test.		
Cooper, L.M., Russell, M. & Frone, M.R.	1990	Cross-sectional survey.	1 933	1 508	78%	1. Overall we found no support for a simple tension reduction model of work stress-induced drinking. Of three separate alcohol outcomes examined, not one was predicted significantly by exposure to work stressors and the experience of work-related negative emotion after both sociodemographic and psychosocial resource variable were controlled. 2. We obtained only qualified support for a social learning model of work stress-induced	1. The cross-sectional design makes it virtually impossible to determine causality. 2. Self-reported drinking habits are a source of bias since research has found that it is not uncommon that it results in underreporting of alcohol use.	2

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						drinking. 3. On the one hand, data showing enhanced vulnerability among individuals with limited coping abilities and strong positive alcohol expectancies support the fundamental logic of the social learning perspective. On the other hand, these effects were neither robust nor consistent across multiple indicators of a given moderator or across multiple outcome measures. 4. The only consistent pattern of significant interaction effects was obtained for drinking to cope. This pattern of findings suggests that individual differences may be more likely to govern motivations for drinking than to influence alcohol consumption or the experience of drinking problems per se. 5. Findings suggest that the real world impact of work stressors on alcohol related outcomes is likely to be small. 6. In relation to prevention, the findings suggests that prevention programs aimed at reducing and managing work stress may not be a cost effective way to address alcohol problems in the work force.		

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Crofton, J.	1987	Review	N/A	N/A	N/A	1. The nature of the problem can be found on three different levels. It is a problem for the employer (e.g., sickness absence, inefficiency, increased accident risks) and for the employee (e.g., physical and mental illness, loss of pay, injury and premature death) as well as for fellow employees (e.g., increased risk for accidents, covering badly done work and a general feel of embarrassment). 2. Estimates of overall cost in Britain varies in research, conducted during 1981 – 1985, from £60 million a year to £2 billion a year (incl. lost hours, accidents, hangover at work). 3. The cost for sickness absence and absenteeism among males (excluding accidents and inefficiency) was by McDonnell and Maynard estimated to £632 million a year. 4. The overall conclusion is that even if figures differ it is fair to say that the cost associated with excessive alcohol use is substantial.		
Cunradi, C.B., Greiner, B.A., Ragland, D.R. et al.	2003	Cross-sectional survey.	1 553	993	64%	1. The results indicate that burnout (emotional exhaustion) is associated with elevated risk of alcohol dependence.	1. The study uses a cross-sectional design and that make it very difficult to determine causality.	3

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						2. The association between burnout and alcohol-related harm, however, was attenuated. 3. The findings suggest that transit operators with higher levels of burnout may be at increased risk for alcohol problems, particularly alcohol dependence.	2. Self-reported drinking data were used and this is a known source of potential bias due to underreporting alcohol use. 3. The study sample comes from one organisation and this in itself might limit the representativeness of the results. 4. A relative low response rate can also affect the representativeness of the study results.	
Delaney, W.P., Grube, J.W., Greiner, B. et al.	2002	Cross-sectional survey.	1 974	1 208	61%	1. As predicted, skipped meals and daily job problems increased length of time to unwind and had an indirect positive relationship with overall drinking, even when controlling for drinking norms and demographic variables. 2. Overall, drinking was positively associated with drinking problems. 3. Supervisor support at work, however, did not significantly influence length of time to unwind. 4. Difficulty unwinding (longer time to unwind)	The authors have raised some limitations in the present study. 1. Unwinding was measured with a single item. Future research should use multiple items to explore the full dimensions of this construct and to undertake a construct validity analysis. 2. This was not a compre-hensive test of the spillover theory. In particular, some important	3

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Author	Year	R.D.	S.S.	R.R.	RR %	Key Findings	Main Shortcomings	R
						did not have direct effects on drinking problems; however, indirect effects through overall drinking were observed.	variables (e.g., reasons for drinking, drinking to cope, etc) were not included in the model. 3. This study used a cross-sectional design; thus it is impossible to ascertain whether job problems and unwinding contribute to higher levels of drinking or whether drinking increases job problems and length of time for unwinding.	
Devlin, N.J., Scuffham, P.A. & Bunt, L.J.,	1997	Human capital approach. Econometric analysis.	N/A	N/A	N/A	1. Using a range of assumptions regarding the proportion of each event attributable to alcohol, the sum of social costs ranged from $1045 million to $4005 million in 1991. 2. The direct costs ranged from $341 million to $589 million, respectively. 3. The total indirect economic costs generated by lost production in 1991 are estimated to be between $704 million an $1135 million under the 4.3% average prevalence rate assumption.	1. The fundamental problem with all cost "estimations" is that they are estimations and it is rare to find two studies that come to the same conclusion using the same methodology to calculate costs. This lack of concordance diminishes the credibility of defining the cost of alcohol use.	1
Eriksson M. & Olsson, B.	2001	Cross-sectional	310	301	97%	1. According to guidelines all Swedish companies should have a drug- and alcohol policy, 75% of	1. Small sample size may decrease the representativeness of the	3

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		survey.				participating companies complied with these guidelines. 2. 7% of companies who performed alcohol/drug testing lacked a written policy. 3. 17% of participating organisations were connected to some form of external support organisations assisting them with alcohol and drug issues in working life. 4. Of all employers 72% reported that they were sure that they had someone with alcohol related problems in the workplace. On the other hand, many of those who said they were sure also said that they should have alcohol related problems in the organisation since it is estimated that some 10% of the population are displaying some kind of alcohol related problems. 5. Among those employers that had an alcohol policy 80% were certain that alcohol related problems existed in their organisation, this should be compared with 37% of those without a policy who reported that alcohol related problems were present in their organisation. 6. 36% of participating organisations conducted alcohol and drug tests. Tests are mostly used,	study results. 2. No discussion about confounding variables that could affect study results (e.g., are there differences between unionised and non-unionised organisations, does gender structure in the workplace affect the policy prevalence, etc.).	

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						31% of organisations, when there is suspicion about alcohol and or drug use. 7. The legal situation for alcohol and drug testing in Sweden is at present open for interpretation.		
Fisher, C.A., Hoffman, K.J., Austin-Lane, J., et al.	2000	Cross-sectional survey	5 389	5 281	98%	1. Consistent with previous studies, heavy drinkers in this sample were more likely to be young, male, enlisted individuals with no more than a high school education. Also, the racial/ethnic distribution of the two drinking groups was different. Whites made up 73% of the heavy drinkers but only 67% of the light drinkers. 2. The most common type of productivity loss for all personnel in any-day category was leaving work early (31.1%), followed closely by working below normal performance level (30.6%), being late for work (28.4%), and not coming to work because of an illness/injury (21.5%). 3. Heavy drinkers had higher frequencies of all productivity loss events (except 'did not come to work because of an illness/injury') than light drinkers and all personnel across all categories.	1. The cross-sectional study design makes it impossible to determining direction of causality. The authors raise concern about an additional shortcoming of the present study. 2. The small number of women made meaningful analysis impossible.	2

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						4. Heavy drinkers were significantly more lightly than light drinkers to be late for work by 30 minutes or more in the preceding 12 months, after adjusting for age. The number of female officer heavy drinkers was too small for a meaningful analysis in both categories. 5. Heavy drinkers were more likely than light drinkers to leave work early in the preceding 12 months, after adjusting for age. 6. The productivity loss event 'hurt in an on-the-job accident in the preceding 12 months' has a threshold of 2 days. There were no significant differences in risk between heavy and light drinkers being hurt on the job for enlisted males and females and for female officers. The numbers of female officers in both categories and male officers above the threshold of 2 days were too small for meaningful analysis. 7. Heavy drinkers were more likely than light drinkers to work below normal level, after adjusting for age, for male enlisted and officers. There was no difference in the risk of working below normal level between heavy and light drinkers for enlisted females. 8. There was no difference in risk of 'not coming to work at all' between heavy and light		

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						drinkers, after adjusting for age, for male and females enlisted and officers.		
French, M.T. & Zarkin, G.A.	1995	Cross-sectional survey.	1 364	1 059	78%	1. Abstainers have lower weekly wages on average than past-year drinkers for all population subgroups, with statistically significant differences for the full sample, the 30 to 59 age group, and females. Daily drinkers had significantly higher wages than non-daily drinkers for the full sample, by gender and for two of three age categories. Furthermore, note that prime-age daily drinkers had significantly higher wages than non-daily drinkers by older daily drinkers had significantly lower average wages than older non-drinkers. 2. Given the presence of a significant nonlinear relationship between alcohol use and wages, it is natural to ask whether wages plateau at a light, moderate, or heavy level of drinking. Using the bounded estimation results, the maximum value for wages occurred at 617 drinks per year (1.69 drinks per day) for the full effect and 876 drinks per year (2.40 drinks per day) for the direct effect and these estimates are significant.	The authors have raised concern about a couple of limitations. 1. Data are cross-sectional and therefore it is impossible to estimate “fixed effects” models. 2. The data only permits us to estimate single-equation wage models. If better instruments were available to explain alcohol use we could model consumption as an endogenous variable along with wages. 3. There is no way to verify the accuracy of the self-reported alcohol use measures. 4. It is very important to recognise that the findings regarding the positive relationship between moderate alcohol use and wages are conditional on working.	3

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						3. Coefficient estimates for the alcohol use terms almost always have t-statistics above the 95 percent confidence level or higher. In addition, the *F*-test for joint significance of the alcohol coefficient are always significant at the 0.05 level and often at the 0.01 level. The quadratic bounded specification reached a maximum at 854 drinks per year (2.34 drinks per day) for the full effect and 1,135 drinks per year (3.11 drinks per day) for the bounded direct effect.		
French, M.T., Zarkin, G.A., Hartwell, T.D. et al.	1995	Cross-sectional survey	1 664	1 262	76%	1. We found that older, single, and less educated people are more likely to smoke and that better educated people and white men are most likely to have consumed alcohol daily in the past year. 2. Looking at the alcohol-related consequences approximately 20% of the drinkers in each worksite, except worksite 1 and 5 were only 9% reported poor performance because of alcohol use during the past year. 3. Fewer than 10% of drinkers at each site indicated that they were tardy, absent, or that they left work early because of alcohol use. 4. None of the participants reported being hurt	A couple of limitations were raised by the authors. 1. The samples are not typical of most full-time workers in some demographic categories. 2. The study relies on self-reported data and that has been found to be a source of underreporting alcohol use. 3. Since data comes from only five worksites it can be difficult to generalize study results (cross-sectional study design).	2

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						in an accident because of alcohol use. 5. Small shifts in the number of drinks per year produce relatively small changes in the probability of poor work performance. 6. The conclusion is that increasing drinking leads to an increased probability of reporting poor job performance due to alcohol.		
Frone, M.R. & Windle, M.	1997	Cross-sectional survey	773	446	58%	1. Employed adolescent males reported significantly higher levels of alcohol consumption per drinking occasion than employed adolescent females. 2. Job dissatisfaction was positively related to both the frequency and quantity of alcohol use. 3. There were significant main effects for both active and avoidant coping and especially active coping were negatively related to frequency and quantity of alcohol use.	1. The authors does not discuss the potential effects of confounding variables 2. The measure on job dissatisfaction only involved two variables ("How satisfaction do you find your job?" and "Do you find your work rewarding?"). This is relatively broad categories that do not involve more extensive information on levels of stress or alienation, to mention two variables. 3. The sample size is relatively small, this would reduce the representativeness of the study.	3

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Gerber, J.K. & Yacoubian, G.S.	2002	Cross-sectional longitudinal survey.	405	69	17%	1. 49 (or 71%) or organisations in this survey had a alcohol/drug-testing program in place at the time of the study. 2. All of the respondents reported that substance use in the construction industry was a problem to some degree. 3. The top three reasons for implementation were: to promote the safety of their workers and those who use their products and services (4.62); a belief that drug testing contributes positively to a company's image (4.41); and as an effective deterrent (4.3). The only factor that was rated as being unimportant was union requirements (1.82). 4. Respondents who indicated that their companies did not drug test were asked to rate the importance for each of eight reasons in their company's decision not to implement a program. The top three reasons mentioned were: a concern for increased legal liability (3.24), too costly (3.06), and prohibited/restricted by state legislation (2.67). No factors were considered unimportant. 5. Drug-testing programs made the most positive impact on the overall safety of the work	The authors have raised some shortcomings of the present study. 1. Because the sample was not large enough to break down by category, all drug-testing programs were treated equally. In cases of a company implementing different drug testing types in different years, the first type implemented was considered the beginning of the policy implementation. Furthermore, no distinction was made between general contractors and sub-contractors. 2. The reader is cautioned that the sample of construction industries included in the sample was comprised of those willing to participate. Given the unusually low response rate (<20%), an assumption that the companies in the study sample accurately reflect the average construction firm in the U.S. would be a precarious one. As a	4

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						environment (1.36), quality of job applicants (1.22), and reducing workers' compensation costs (1.06). 6. The average company that drug tests in the study sample reduced its injury incident rate 51% within two years of implementation, from a rate of 8.9 injuries per 200 000 work-hours to 4.4 injuries per 200 000 work-hours.	result, questionnaire responses, as well as changes in company injury incident rates and experience ratings, may reflect factors other than the implementation of drug testing.	
Gleason, P.M. Veum, J.R. Pergamit, M.R. et al	1991	Longitudinal Study.	12 686	12 069	95%	1. 9% of all workers aged 19-27 believed that drinking "has ever interfered with work on a job." 2. Men were twice as likely as women to report alcohol interfering with their work. 3. Even though many reported that they believed that their drinking habits had affected their work-performance few thought that it had affected their careers. 4. 4.4% men and 1.6% women reported getting drunk on the job.	1. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use. 2. No data on potential causes of alcohol use at or in association with work. 3. No analysis of potential confounding variables	2
Greenberg, E.S. & Grunberg, L.	1995	Cross-sectional survey.	2 102	1 247	59%	1. In general, it is the younger workers, the unmarried, those with parents having a history of alcohol problems, and those of low socioeconomic status (family income and	1. Study relies on self-reported drinking habits a source found to be affected by underreporting of alcohol use.	3

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						education) who are most likely to report some form of problem drinking, whether heavy drinking or negative consequences from drinking. 2. The independent workplace variables and the psychological distress variables correlate most strongly with the drinking to cope measure. Drinking to cope, in turn, is significantly related to drinking problems, as previous research predicts, suggesting that this might be an important link in the generation of alcohol problems. 3. The study found that the direct effects of low skill and participation in workplace decision-making on heavy drinking and drinking problems are minimal, once background factors are controlled. 4. Alienating work does increase problem drinking, but it does so indirectly through its effects on job satisfaction and then through the latter's effect on a set of beliefs about, or justifications for, drinking alcohol. 5. The positive relationship between job autonomy and alcohol problems suggests that for some people there may be risk attached to work requiring a great deal of responsibility.	2. The cross-sectional study design makes it impossible to determine causality. 3. A relative low response rate could affect the representativeness of the study results.	

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						6. Participation in decision-making over working conditions in the plant is associated with a lower incidence of alcohol problems.		
Grube, J.W., Ames, G.M. & Delaney, W.	1994	Cross-sectional survey.	1 300	984	76%	1. Overall, 73% of the respondents were drinkers. The median number of occasions on which drinkers reported consuming alcohol in the past year was 30, and the median number of drinks consumed per occasion was 2.5. Just over 17% of the respondents reported engaging in heavy drinking (10 or more drinks on a single occasion) at least once during the previous year. 2. A small percentage (5%) reported having had four or more drinks within an hour of going to work at least once during the previous year and 23% reported drinking during working hours at least once. 3. 19% of the drinkers reported drinking at work at least monthly, and 41% reported usually having two or more drinks when they did drink at work. 4. As anticipated, employees who believed that work-related drinking was likely to have positive personal consequences and unlikely	1. Data gathered within one organisation might limit the representativeness of the study results. 2. Self-reported drinking data has been found to be a source of bias since it is not uncommon with under-reporting if alcohol habits. 3. Little discussion about confounding variables that could affect study results. 4. The authors raise concern about one shortcoming of the present study. 5. Descriptive data that do not tell the reader about potential association between various variables.	2

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						to have negative consequences reported significantly more drinking at work. Similarly, employees who believed that work-related drinking would lead to negative personal consequences reported lower rates of drinking just prior to work. An examination of the path coefficients representing the effects of positive and negative expectancies on drinking at work suggested that negative expectancies might be a somewhat more important predictor of this variable, although the absolute difference between the coefficients was not significant when equality constraints were applied to the equations, χ^2 (1) = 2.14, p < .14. 5. Drinking at work and just prior to work also were directly predicted from a number of the background variables. African-Americans, heavy drinkers, and employees on the evening or night shifts reported drinking before work more often than did other employees. Younger employees and those reporting more frequent drinking and heavy drinking drank more often while at work. 6. Turning to expectancy beliefs, Caucasians and hourly employees believed it was more likely		

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						that work-related drinking would lead to positive consequences and less likely that it would lead to negative consequences. Younger workers and employees on evening or night shifts also believed it was less likely that work-related drinking would have negative consequences. Higher rates of both drinking and heavy drinking outside of work also decreased the perceived likelihood that work-related drinking would have negative personal consequences. Surprisingly, however, positive expectancies were not significantly related to drinking or heavy drinking outside the workplace in this analysis. 7. Caucasian, hourly, or evening or night shift, a more frequent drinker, or a more frequent heavy drinker all increased work-related drinking indirectly because they increased positive expectancies or decreased negative expectancies.		
Grunberg, L., Moore, S. & Anderson-Connolly, R. et al.	1999	Cross-sectional survey.	3 700	1 645	44%	1. As found in previous investigations, the pattern of correlations illustrates that of the demographic data collected, younger, unmarried male employees tended to report drinking more alcohol and having more	One shortcoming of the present study was raised by the authors. 1. Cross-sectional data does not permit us to draw causal inferences.	3

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						alcohol-related problems as compared with other respondents. 2. The three reasons for drinking alcohol were all moderately inter-correlated, and self-reported alcohol intake and alcohol problems (*r* = .53) demonstrated a moderate to strong association. 3. As compared with other reasons for drinking, escape reasons for drinking alcohol was most strongly correlated with self-reported alcohol problems, whereas for self-reported alcohol intake, the strongest association were with both escape and enjoy reasons for drinking. 4. Consistent with the escapist hypothesis, we obtained a significant and positive interaction between job stress and escape reasons for drinking for both dependent measures. That is, the effect of stress on self-reported alcohol intake and drinking-related problems became greater with increased escapist reasons for drinking. 5. We found that the effects of stress reversed direction depending on the moderating influence of escapist reasons. For those with no escapist reasons, stress was associated with less self-reported drinking and alcohol-	Other shortcomings of the present study is: 2. The low response rate, that after removing missing cases, fell down to 44%. This could have a negative effect on the representativeness of the study results, even within the organisation itself since that consists of approximately 100.000 employees. 3. Data comes from one organisation and may therefore not be that easy to implement in other organisational settings.	

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						related problems, whereas at higher values of escape, stress acted to increase self-reported drinking and alcohol related problems. 6. We know that other reasons for drinking did not significantly interact with work stress on either self-reported alcohol intake or alcohol-related problems. That is, when the Stress X Social reasons for drinking and the Stress X Enjoy reasons for drinking were included as moderators in additional regression analyses, for any level of social and enjoyment reasons for drinking, changes in the job stress were not significantly related to self-reported alcohol intake or alcohol-related problems.		
Grunberg, L., Moore, S. & Greenberg, E.S.	1998	Cross-sectional survey.	2 150	972	45%	1. Job dissatisfaction was significantly related to negative consequences due to drinking, and furthermore, the interaction effect of job satisfaction and coping reasons for drinking on negative consequences was as predicted in hypothesis 2b. 2. They found that while job satisfaction is, in general, negatively associated with the number of negative consequences from drinking, the relationship is most powerful among those respondents who interpret	1. Relative low response rate. 2. The cross-sectional study design make determination of causality impossible. The authors have raised one limitation of the present study. 3. The use of only one coping response to stress. This was also a fact that affected the response rate since all abstainers were excluded from the sample.	3

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						drinking as a means of coping. 3. These findings suggest that efforts to improve job conditions and job satisfaction may have beneficial effects precisely for those most vulnerable to problematic drinking (that is, for those who believe alcohol is an effective way to cope with stress).		
Hagihara, A., Tarumi, K., Miller, A.S. et al.	2000	Cross-sectional survey.	465	397	85%	1. The most efficient variable that distinguished between those who drank more heavily and those who did not was "work position" (p < .0001). This variable divided the total subjects into two groups: "higher or middle class managers" and "lower class managers and staff members". Next among the higher or middle class managers, "work requires advanced skills and sophisticated knowledge" was the best predictor of heavy drinking (p < .025). 2. Of the 11 work stressors and work position variables examined in this study, four variables ("position", "work requires advanced knowledge and skill", "time pressure" and "clear job purpose or goal") were identified as significantly related to heavy drinking. 3. We found that heavy drinking was related to a	The authors raise some concerns regarding a couple of limitations in the present study. 1. The authors used a one-item stress measure whose validity and reliability had not at the time of the study been fully verified. 2. The findings concerning work stressors and alcohol consumption were obtained among male white-collar workers in a Japanese company; the Japanese work environment is not a widely encountered model. Therefore, the external validity of this study might be limited to other male white-	3

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						higher order interaction of multiple work and personality factors: "Position" x "Work requires advanced knowledge and skill" and "Position" x "Time pressure" x "clear job purpose or goal".	collar workers in Japan.	
Harrison, J.E. Mandryk, J.A. Frommer, M.S. et al.	1993	Case study Register data	1 544	?	?	1. Blood alcohol concentration data were obtained for 76% or 278 of the at-work cases. 2. 15% of the at-work cases for which blood alcohol concentration data were available had values of 0.05g/100mL or more. 3. Trucks were the predominating vehicle involved in fatal work accidents.	1. The present study does not take into account confounding variables that may affect the research results. 2. Unclear sample size make it very difficult to determine representativeness of the present study.	4
Heirich, M. & Sieck, C.J.	2000	Cross-sectional longitudinal survey.	?	2 000	?	1. Drinkers were more likely than non-drinkers to have CVD (cardiovascular disease) risks. For example, whereas 24% of non-drinkers had problems with blood pressure, 30% of the drinkers were hypertensive. Moreover, 66% of the hypertensive drinkers were consuming alcohol at levels that could put their health at risk. 2. Cardiovascular risk reduction is an effective route for lowering or preventing alcohol	1. Unclear sampling procedure and lack of information regarding initial sample make it difficult to determine the representativeness of the present study.	4

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						abuse. At rescreening, 43% of the workers who had been identified as at-risk drinkers at the initial screening were either abstemious or had reduced their alcohol consumption to levels that no longer put them at risk		
Hemmingsson, T. & Lundberg, I.	2001	Cohort longitudinal survey	49 323	42 001	85%	1. Persons who in late adolescence reported heavy use of alcohol more often received an alcoholism diagnosis if they were later exposed to a work environment characterised by low control when compared to those jointly unexposed. 2. The similar analyses for manual workers showed results very similar to those concerning the entire study population. Some men in manual occupations with low control, who reported heavy use of alcohol, seemed to receive an alcoholism diagnosis only because of the joint exposure. Among blue-collar workers, low control showed an elevated RR only in combination with heavy use of alcohol reported in adolescence. 3. It seems that as if long-term exposure to low work control was related to high level of alcohol consumption.	The authors have discussed several limitations in their study. 1. Only men were considered and the follow-up period were relatively short (8 years). 2. In survey investigations, considerable underreporting of alcohol consumption is likely, and underreporting is assumed to occur in proportion to actual consumption levels. 3. There may be some misclassification of individuals in the study with regard to work control. Such misclassification is independent of both background factors and outcomes, and would thus result in a bias towards unity in the RRs associated with work	1

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							control.	
Hemmingsson, T. & Lundberg, I.	1998	Cohort longitudinal survey.	49 323	42 001	85%	1. Low work control, in particular in combination with low work demands, and low work social support are related to later alcoholism even after controlling for previously known risk factors (including risk use of alcohol). 2. The results suggest that young men may respond to and undemanding occupational environment by increasing their alcohol consumption.	The authors have discussed several limitations in their study. 1. Only men were considered and the follow-up period was relatively short (8 years). 2. In survey investigations, considerable underreporting of alcohol consumption is likely, and underreporting is assumed to occur in proportion to actual consumption levels. 1. There may be some misclassification of individuals in the study with regard to work control. Such misclassification is independent of both background factors and outcomes, and would thus result in a bias towards unity in the RRs associated with work control.	1
Hope, A.,	1998	Cross-	877	729	83%	1. Qualified nurses reported the highest stress	1. The use of self-reported drinking	2

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Kelleher, C.C. & O'Connor, M.		sectional survey.	457 420	418 Stage 1 311 Stage 2	92% 74%	levels while student nurses reported more negative lifestyle practices such as smoking, alcohol consumption and drug use. A greater number of current smokers (29%) consumed alcohol and used drugs than non-smokers. 2. The impact of intervention strategies around compliance with smoking policy and worksite walk routes reduced exposure to passive smoking at work for qualified nurses and increased exercise participation for both groups of nurses. 3. Workplace was identified as the main source of stress which included relationships at work and demands of the job. 4. Hospital nurses experiencing high work stress were more likely to use professional support and personal coping (discuss problems with friends/family, have a good cry and eat more) than others. 5. Nurses believed in the importance of health promotion as part of their work; however, qualified nurses felt more confident and gave more health related information than student nurses. 6. Student nurses perceived a lower risk of contacting AIDS through work and a higher	data is a potential source of bias. This due to the fact that self-reporting usually results in underreporting of alcohol use. 2. Data comes from one occupation with predominantly female employees; this would decrease the applicability of these results to workplaces with similar characteristics. 3. Descriptive data that do not provide any information on potential correlation between various variables.	

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						concern/worry in caring for AIDS patients than qualified nurses.		
Howland, J., Mangione, T.W., Kuhlthau, K., et al.	1996	Cross-sectional survey	7 255	5 731	79%	1. Women, on average, drank fewer drinks on a typical day than men (1.89 vs. 2.19 drinks); moreover, there was smaller variance in typical daily drinking among women than among men. Both sexes showed a reduction with age in the mean number of typical daily drinks; and, both sexes showed a reduction in variance with increasing age. 2. Among the demographic variables, age was significantly and positively associated with average daily volume (ADV) and significantly but negatively associated with Typical daily drinking and Episodic heavy drinking; sex was associated with all three drinking measures (men reported higher levels of drinking than women). 3. Marital status was significantly associated with all three drinking measures (never married respondents reported highest levels of drinking). 4. Religion was significantly associated with all three measures of drinking, with Catholics reporting higher levels than Conservative	The authors raise a concern regarding one shortcoming of the present study. 1. The interpretation of study findings is limited by the cross-sectional study design. This makes it impossible to make any definite conclusions on whether variations in drinking across worksites are due to selection, facilitation or causation.	2

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						Protestants or Jews; and, similarly, religiosity was significantly and negatively associated with all three drinking measures. 5. Education was marginally associated with ADV and significantly but negatively associated with Typical daily drinking and Episodic heavy drinking. 6. Race was significantly associated with all three drinking variables (white respondents reported higher levels than non-white). 7. Family income was not significantly associated with any of the drinking variables. 8. Among the job situation variables, functional area was significantly associated with all three drinking measures, with managers in sales reporting the highest levels and managers in technical, accounting, and marketing functional areas reporting the lowest levels. 9. Position in management hierarchy was significantly and positively associated with ADV but not with Typical daily drinking or Episodic heavy drinking.		
Howland, J., Mangione, T.W., Lee, M., et al.	1996	Cross-sectional survey.	9 163	6 540	70%	1. Overall, 65% of all respondents supported pre-employment alcohol screening; 81% supported testing for alcohol after an accident	1. The use of self-reported drinking data is a potential source of bias, since it often has resulted	2

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						causing an injury; and 49% supported random alcohol testing at the work site. 2. Managers, first-line supervisors, and workers without supervisory experience were not significantly different with regard to the proportions supporting pre-employment testing or random testing, but were significantly different with regard to the proportions supporting pre-employment testing or random testing, but were significantly different with respect to alcohol testing after an accident (86% vs. 82% vs. 80%). Men were significantly more likely than women to support pre-employment testing (66% vs. 63%) and testing after an accident (82% vs. 80%) 3. There were significant differences in support by occupation for each of the three types of testing. In each case, however, transporting workers were most likely to support testing; 84% of these workers supported pre-employment screening; 88% supported testing after an accident; and 72% supported random testing. Sales workers were least likely to support pre-employment testing (41%) and random testing (31%); service workers were	in underreporting of alcohol use. 2. Descriptive data provide little information regarding correlation between various variables.	

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						least likely to support testing after an accident. 4. Employees at manufacturing sites were most likely to support pre-employment testing (78%), testing after an accident (84%).		
Imaki, M., Hatanaka, Y., Ogawa, Y., et al.	2002	Cross-sectional survey.	2 000	2 000	100%	1. Compared with those sleeping 6 hours or less, smoking was slightly more frequent for those in the group sleeping 6.1 to 8.9 hours for each year; but the difference between the two groups was not significant. For alcohol drinking habits, there was no significant difference between those two groups.	1. Data collected from a single worksite might affect the representativeness of the results and as such the result might not be applicable to other work settings. 2. The potential for confounders affecting research results is not discussed. 3. Little analysis between hours of sleep and lifestyle factors.	4
Jinks, A.M. & Daniels, R.	1999	Focus group	?	27	?	1. The overwhelming opinion of those interviewed was that stress was the most important work-related health issue concerning them. 2. Causes of stress for several of those interviewed were cited as being related to various aspects of their work. Some thought about the nature of the work they were	1. Unclear sampling procedure. The authors have raised a couple of limitations of the present study. 2. Limitations of the study related to it being in essence a small scale exploratory study. For example, it is not possible to make generalisations from the	4

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						undertaking was a contributory factor. For example, it was thought by participants that caring for critically ill people in areas such as intensive care units was highly stressful. Other, however, said that insufficient staffing levels were a major cause of stress. 3. The work environment was seen as contributing to the stress experienced by the focus group participants. For example, overcrowded working conditions meant some were standing for long periods in cramped working spaces. Other complained about working in rooms with no windows. Particular health and safety issues were also raised. For example, concerns were voiced about the risks of contracting infectious diseases, needle-stick injuries, back problems, dealing with aggressive patients and operating potential hazardous equipment. 4. Alcohol consumption and drug misuse were seen as a sensitive area when raised by the researchers. At least one member of one of the focus groups has past difficulties with a member of staff who at times was unable to work effectively due to their alcohol consumption. This person said it was very	findings. The transferability and applicability to other settings of the finding of this study is therefore low. The sampling method will have also introduced bias into the findings. 3. Focus groups may be seen as a quick and easy way of collecting data. However, there is no way of knowing if all the interviewees' true feelings were given. 4. It should be noted that males were generally under-represented in the group. Thus the "Peacock effect" may have influenced the group interactions. Similarly as the group were mixed occupationally therefore actual or perceived hierarchies within the focus group could have affected the willingness of participants to contribute.	

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						difficult to identify support for themselves as the person's manager and for the employee who had the problem.		
Jones, S., Casswell, S. & Zhang, J-F.	1995	Cross-sectional longitudinal survey.	4 662	2 638 Drinkers	57%	1. Estimates of reduced work efficiency were derived from US figures, which estimated a 25% reduction in work performance among heavy alcohol users; 3.7% of the sample reported alcohol-related absences and 12% reported reduced efficiency days. 2. There was a significant difference in both the number and cost of absentee and reduced efficiency days reported between the top 10% and the bottom 10% drinkers. 3. A conservative estimate of alcohol-related lost productivity among the working population on New Zealand (with a population of 3.4 million and a per capita absolute alcohol consumption of 9.7 litres) was found to be $57 million per year.	The authors have raised some important limitations of the present study. 1. There are other factors which may have contributed to this being a conservative estimate of alcohol-related lost productivity among the employed. First, that only 1 day lost per absentee episode was costed. Secondly, the reduced productivity figure of 25% used to calculate reduced work performance was considered by its authors to be a conservative estimate. 2. The use of population survey data may have also contributed to a conservative estimate in that such surveys tend to exclude the very heavy drinkers, who are not easily contactable by the survey methods employed. The method also	3

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							relies on self-reported reduced efficiency. There may be more people and occasions where alcohol has some effect on productivity, but the respondents were not willing or did not think it important enough to acknowledge this in the survey.	
Jones-Lee, M.W.	1993	Review	N/A	N/A	N/A	1. Statistics from Finland indicate that during recent years, alcohol involvement rates have been 8 – 10% in industrial accidents. 2. Measurement of the marginal social cost of a particular safety improvement presents little conceptual or practical difficulty and is essentially a question of establishing the resource costs of the manpower, equipment or regulatory procedures involved. By contrast, the marginal social *values* of safety improvements is an altogether more problematic and elusive concept. 3. A safety improvement that could be expected to avoid one fatal injury would be accorded a value equal to the discounted sum of the potential victim's future output that would be		

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						preserved by preventing a fatality. Corresponding output-based values of prevention of non-fatal injury would, in addition to avoided output losses, also incorporate estimates of avoided medical and other direct economic costs associated with the level of disability resulting from the injury. Such an approach to the definition of values of health and safety has naturally come to be known as the 'gross output' (or 'human capital') approach. 4. The essence of objection to the gross output approach is that most people almost certainly value safety principally because of their aversion to the prospect of their own and others' death and injury *per se,* rather than because of a desire to preserve current and future levels of output or income. This suggests that values of safety out ideally, to be defined so as to reflect people's pure preferences for safety, as such. 5. Under what is not surprisingly referred to as the 'willingness-to-pay' approach to the valuation of safety, one first seeks to establish the amounts that affected individuals would be willing to pay for (usually small)		

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						improvements in their own and others' safety. These amounts are then aggregated across all of the individuals to arrive at an overall value for the safety improvements concerned. 6. So far, empirical work on the economics of safety has dealt primarily with fatal, rather than non-fatal injuries so that we know a great deal more about the value of statistical life than we do about the value of preventing non-fatal injuries. In fact, to date, there have been about 22 published revealed preference studies and 13 published contingent valuation studies, principally for the USA and UK but also including studies for Canada, Austria, Sweden and New Zealand. 7. The key features of the results of these studies are that, in £-sterling 1991 prices, the mean and median estimates of the value of statistical life from the revealed preference studies are respectively £2 340 000 and £1 050 000 while the corresponding figures from the contingent valuation studies are £3 210 000 and £2 030 000. As such, it is clear (a) that the willingness-to-pay based values for the avoidance of a fatality are substantially larger than the gross output based values referred to		

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						earlier; (b) that, at least as far as central tendency measures are concerned, the revealed preference and contingency valuation procedures produce broadly similar estimates. 8. The first and most obvious difficulty in obtaining empirical estimates of willingness-to-pay based values of preventing non-fatal injuries is that the latter covers a spectrum ranging from minor cuts and bruises with no admission to hospital, through to injuries resulting in severe permanent disability. While some revealed preference studies base on labour market data have attempted to elicit such values, their success has been very limited and the resultant figures apply to an unsatisfactorily wide and heterogeneous class of injuries. 9. The willingness-to-pay based values of safety were derived principally for work-related and transport risks in various developed countries. This raises two important questions for present purposes. First, can such values be taken to have any direct implications for the assessment of programmes aimed at reducing alcohol-related accident rates? Second, to		

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						what extent is the willingness-to-pay approach relevant and/or potentially applicable in the developing – as opposed to developed – country contexts, given the extensive cultural and educational differences that exist between the two.		
Kawakami, N., Araki, S, Haratani, T. et al.	1993	Cross-sectional survey.	2 581	1 298	50%	1. Male subjects worked significantly longer overtime and had higher scores of job overload and job future ambiguity than females subjects did. On the other hand, females had significantly higher scores on lack of intrinsic work rewards than males. 2. Frequency of drinking was significantly higher in males than in females. 3. The number of drinking problems was significantly greater in males than in females. No significant gender differences were observed in the amount of alcohol consumed per occasion. 4. Overtime related significantly and positively with frequency of drinking in males, while rotating shift related significantly and negatively with frequency of drinking. 5. None of the work stressors related significantly with frequency of drinking in females.	1. This study relies upon self-reported alcohol use a source of information found to be biased by underreporting drinking habits. 2. The study only examines current alcohol users and this hampers the study results (e.g., does drinkers' experience of work load differ from non-drinkers?). 3. A relative low response rate will negatively affect the representativeness of the study results. 4. A lack of analysis regarding confounding variables and their potential impact upon the study results. 5. The authors raise one concern about the cross-sectional design.	3

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						6. Overtime and lack of intrinsic work rewards were significantly and positively related with amount of alcohol consumed per occasion in males. 7. Job future ambiguity related significantly and positively with amount of alcohol consumed per occasion in females. 8. Overtime and lack of intrinsic work rewards were significantly and positively associated with problem drinking in males. 9. None of the work stressors were significantly associated with problem drinking in females. 10. The five psychosocial stressors significantly and positively related with depressive symptoms in males. 11. Lack of intrinsic work rewards, job future ambiguity, and lack of social support at work related significantly and positively with depressive symptoms in females.	6. The interpretation of the present results is greatly limited by the cross-sectional study design: the causality is not clear.	
Kenkel, D.S.	1997	Cross-sectional survey.	2 036	1 507	74%	1. Holding other factors constant, the probability that a self-insured firm offers an EAP is estimated to be 59%, compared to 51% for a firm that purchases market group health insurance for its employees.	1. Descriptive data leaves little information regarding potential relationship between different variables.	3

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						2. Unionised worksites and larger worksites are also found to be more likely to offer worksite alcohol programs, compared to non-unionised smaller worksites. 3. Worksites with younger workforces are less likely than those with older employees to offer alcohol programs. 4. The conclusion is that the empirical results are consistent with the conceptual framework from labour economics, since self-insurance is expected to increase firms demand for worksite alcohol programs while larger worksites is expected to reduce the average program cost. 5. The role of union status and workforce age suggests it is important to consider workers preferences for the program as fringe benefits. 6. The results also suggest that the national trend towards self-insurance may be leading to more prevention and treatment of worker alcohol-related problems.		
Kishchuck, N.,	1994	Pretest-	645	387	60%	1. Among the health problems assessed, stress	1. Small sample size.	3

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Peters, C., Towers, A.M., et al.		posttest survey.	Pretest	Pretest 268 Posttest	42%	was the most frequently reported. 39% of respondents had felt stressed during at least one day of the previous week. The only health problem significantly associated with quantity of alcohol consumed was headache. 2. Interest in worksite alcohol health promotion program was very low (less than 10%). The most popular topic was nutrition, with 55% of employees expressing interest. 3. Results showed that the intervention significantly improved alcohol-related knowledge, socially responsible attitudes, and feelings of self-efficacy regarding alcohol consumption. In addition, reported weekly consumption was significantly lower in the alcohol group after the intervention. 4. Knowledge was significantly greater in the alcohol group than the control group following the intervention. However, the nutrition group also had greater alcohol-related knowledge than the control group, whereas the alcohol and nutrition groups did not differ in their knowledge after the intervention. This seems to show that the nutrition intervention was just as effective as the alcohol intervention in improving alcohol knowledge.	2. Data comes from one worksite and may therefore not be applicable to other work settings. The authors indicate several factors that need to be taken into consideration when analysing the study results. 3. It is clear that this brief educational intervention cannot be expected to produce durable attitudinal or behavioural change without concomitant educational reinforcement and social and environmental support. The results, although statistically significant for two outcome variables, should be thus interpreted as indicative of a potential effect. 4. A second precaution concerns the reduced weekly consumption in the alcohol group. Although this finding seems to follow directly from the program objectives, we	

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						5. The nutrition intervention seems to have produced a robust improvement in perceived self-efficacy for drinking management behaviour. Following their participation, the nutrition group reported significantly greater feelings of self-efficacy than both the alcohol group and the control group.	must be circumspect about its interpretation for two reasons. First, the implemented version of the program, after revision during the formative evaluation, did not specifically aim to reduce consumption. Second, it seems implausible that such short-term intervention could have produced a real change in an ingrained consumption pattern. 5. A final precaution that should be taken when interpreting the program's positive effects on attitudes and behaviour is that of the biased nature of participation. It is clear that certain subgroups of employees were less likely to participate than others.	
Kivimäki, M., Kuisma, P., Virtanen, M., et al.	2001	Cross-sectional survey.	2 795	2 299 (689)	82% (25%)	1. Shift workers were found to smoke more and to be overweight more often than day workers 2. Shift work was not associated with alcohol intake or sedentary lifestyle.	1. Unclear sample procedure in the sense that if the sample for this paper consists of 689 participants then leaves the	2

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						3. This evidence is compatible with the possibility that shift work in nurses increases smoking and being overweight to a degree that contributes to health problems, including coronary heart disease.	authors with a response rate of only 25%, which is a very low. The authors have raised a couple of limitations in the present study. 2. The reliance of cross-sectional data. Such data do not make it possible to draw definite conclusions regarding causality between constructs. 3. In shift-work research, consideration of potential bias due to selection out of the study cohort is particularly important. In the present study , selection out of work may have led to under-evaluation rather than over-evaluations of the associations. This is because those who drop out of work are typically less healthy than others (called the healthy worker effect) and poor health is associated with poor health habits.	
Kjærheim, K.,	1995	Cross-	7 542	4 829	64%	1. In the logistic regression analysis, the	1. A relative low response rate	3

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Mykletun, R., Aasland, O.G. et al.		sectional survey.		(3 267)	(43%)	probability of heavy drinking was increased by two social modelling factors and one structural factor. 2. Having co-workers who, at least weekly, took an end-of-work drink at the workplace gave an odds ratio for heavy drinking of 2.8. 3. Having co-workers who went out after work at least every week gave an odds ratio of 1.8. 4. Working at a place with a liberal alcohol policy gave an odds ratio of 1.5. 5. Among the background factors, only household type significantly predicted heavy drinking. As compared with living with children, the odds for heavy drinking when living alone was 4.3. 6. The results indicate that preventive measures in the restaurant business should not only concentrate on the individual, but also deal with factors related to the occupational activity that promote and sustain heavy drinking.	might affect the representativeness of the study results. The authors have raised concerns about a couple of shortcomings in the present study. 2. Since a cross-sectional design was used, no causal ordering can be established between structural and modelling factors and heavy drinkers. 3. The use of self-reported drinking habits is a limitation as it has been found to be a source of underreporting. This would affect the validity of this information.	
Kronenfeld, J.J., Jackson, K.L., Davis,	1988	Cross-sectional survey.	569	455	80%	1. About one third did not drink, one-quarter drank only one to two drinks a week, and another quarter drank three to eight drinks a	1. The cross-sectional study design makes it virtually impossible to determine direction of causality.	3

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K.E. et al.						week. 2. One the binge question, two-thirds had no binge episodes and 12% reported five or more in the last 6 months. 3. Women were less likely to drink than men and drank less heavily, as did non-whites relative to whites and the least educated group. 4. Income was not related to drinking. 5. The relationship with age was complicated, but the young workers (18-25 years of age) were less likely to be drinkers and least likely to drink heavily. Married people with children present were the highest percentage of non-drinkers (43% vs. 25% in the other three groups). Both groups with children had the lower percentages of heavy drinkers. 6. One the binge question, age, race, and income were not significantly related to alcohol practices. Education had a complicated relationship in which college graduates were more likely to binge than those with more or less education. Women binged far less (77% never binged vs. 54% of men), as did both groups with children living in the household. 7. Almost 30% had a positive habit initially, and 21% improved, leaving about half who did not	2. Relative small sample size. 3. Data comes from one project aimed at government employees and might therefore not be representative to other work settings. The authors raises concern about one confounding variable that might have affected the study results. 4. The real possibility of contamination effects due to the close proximity of agencies who did and did not receive programs and the presence of some environmental changes in all agencies (a newsletter, some changes in smoking policies, debates over mandatory seatbelt law and enactment of a child safety restrain law) make conclusions tentative as to the importance of the health promotion effort on the large amount of behaviour change found.	

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						change this aspect of alcohol behaviour. For the binge question, those who were non-drinkers for the past two years were defined as already practicing a positive habit, along with those who binged no more than four times in the last six month.		
Lapham, S.C., Chang, I. & Gregory, C.	2000	Case-control survey	3 300 1 950 Case 1 350 Contr.	?	?	1. Early results from this study show that Managed Care Organisations (MCO) might facilitate interest in prevention in a number of ways. Program managers can benefit from knowing that strong messages concerning substance abuse are not negatively received; benefits designers can build packages emphasising these value-added services; marketing executives can use this information to help employer groups overcome fears of negative perception.	1. Unclear response rate. The authors raise the following limitations of the study. 1. A majority of outcome measures are from sources that require voluntary participation. Results may not reflect behaviour of non-participants. 2. Because of the industry under study is health care, employees, some of whom are accustomed to working around and handling controlled drugs, may react to substance abuse messages in ways that are not typical of non-health care workers. 3. The intervention site differs from comparison sites in that it contains an acute inpatient	4

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							hospital. Findings from this population may not generalise to employees in the outpatient setting.	
Landsbergis, P.A., Schnall, P.L., Deitz, D.K. et al.	1998	Cross-sectional survey. Prospective.	285	189	66%	1. Prospectively, among 189 men, increase in job decision latitude over 3 years was associated with a decrease in cigarette smoking. 2. Education (as a measure of socioeconomic status) was significantly associated with smoking, less sedentary behaviour, and less overweight, but was not associated with alcohol use. 3. Frequent/binge drinking was not associated with decision latitude, demands, or job strain. 4. Change of job characteristics was not associated with change in overweight or alcohol use.	1. Small sample size affects the representativeness of the present study as does the only male sample. 2. Relatively low response rate could affect the representativeness within the organisation itself. 3. The study relies on self-reported alcohol use a data source found to increase the likelihood of underreporting. 4. The cross-sectional study design makes it virtually impossible to make any definitive decisions regarding causality.	3
Lehman, W.E.K. & Bennett, J.B.	2002	Cross-sectional survey.	2 149	1 866	87%	1. Results suggest that employees in risky job positions, besides being substantially more likely to report substance use problems, were	Some limitations of the present study has been raised by the authors.	2

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						more likely to be less educated males than their counterparts in less risky work positions. 2. There were few job-related differences between low- and high-risk jobs. Only job-stress had a significant odds ratio for both cities, indicating that employees in high-risk jobs reported less stress than those in low-risk jobs. This does not support the notion that higher job stress may help explain higher levels of substance use among employees in high-risk jobs. 3. Employees in high-risk jobs in both cities reported more co-worker use. 4. The findings related to substance use indicated that the set of personal background variables, particularly those representing deviant behavioural styles, could fully account for the relationship between job risk and problem drinking in both cities. 5. Employees with drinking problems were more likely to report deviant behaviour styles than others do, including less frequent religious attendance, higher levels of risk taking, criminal behaviour and more tolerable towards co-worker substance use. 6. Employees in high-risk jobs in both samples	1. The samples in this study were drawn from two municipal workforces in the same geographic region and they may not be fully generalisable to other organisations or regions. The types of individuals attracted to municipal jobs may differ from those attracted to other types or organisations, and the organisational culture may not readily generalise to other organisations. 2. Self-reported data has limitations concerning the reliability of the information obtained, especially considering the sensitive nature of the subject content. It is accepted that some degree of underreporting occurred in the responses, especially those concerning undesirable behaviours such as substance use. 3. The cross-sectional study design	

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						reported less job stress and stronger drinking climates. Among job-related factors, work group drinking climate (co-worker drinking) had the strongest relationship with substance use. 7. Analysis of interaction effects suggested that exposure to co-worker drinking increased the negative effects of employee deviance. In both samples, employees were more likely to report substance use problems when they met two criteria: (1) they reported three or more indicators of deviance (arrest, risk-taking personality, low church attendance, and tolerance of substance use) and (2) they experienced a drinking climate at work.	makes it impossible to determine causality.	
Lennox, R.D., Steele, P.D., Zarkin, G.A. et al.	1998	Cross-sectional survey	?	8 755	?	1. The results show that consumption is strongly associated with loss of control (β = 0.57, P < 0.001) and that the loss of control is strongly associated with adverse consequences (β_3 = 0.76, P< 0.001). 2. The results indicate that loss of control is more closely related to adverse alcohol-related consequences than are high rates of alcohol consumption. The mediating model shows that when the effects of loss of control on	1. No discussion regarding potential impact of confounding variables. 2. Unclear sample make it impossible determine response rate. 3. The sample could potentially be contaminated by those not actively participating on the labour market since the sample	3

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						adverse consequences are removed from the effects of high consumption on consequences, the effects of high consumption decrease substantially. 3. Using the NHSDA measures, the correlation between consumption and loss of control is 0.46, between consumption and adverse alcohol-related consequences is 0.39 and between loss of control and adverse alcohol-related consequences is 0.57. All of these constructs are significantly related to each other. 4. When controlling for loss of control, the relationship between consumption and adverse consequences becomes relatively low (0.18). This suggests a strong mediating effect of loss of control in explaining the relationship between consumption and adverse consequences in a non-clinical sample of members of the labour force.	is drawn from those who are active and potentially active on the labour market. 4. Unclear response rate make it difficult to determine the representativeness of the present study.	
Lindquist, T.L., Beilin, L.J. & Knuiman, M.W.	1997	Cross-sectional survey.	831	654	79%	1. Men had higher average systolic BP (by 8 mm Hg) and higher diastolic BP (by 3 mm Hg) than women. Men reported exercising more than women. Men were more likely to be drinkers, drank more alcohol, and showed higher scores	1. The use of self-reported alcohol use has through research in many cases been found to result in under-reporting of drinking habits.	3

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						for unhealthy and lower scores for health eating patterns. 2. Examination of the overall job stress or home/work stress scores showed no significant male/female differences. 3. Average weekly alcohol consumption was significantly correlated with both systolic and diastolic BPs in men. 4. In men, both job and home/work stress correlated with drinking status and with consumption coping and avoidance/denial coping. Home/work stress also correlated with unhealthy eating in men. In women, lifestyle factors and sources of stress were not significantly correlated. Avoidance/denial coping behaviour was correlated with job stress in women, as for men. 5. In men and women external/social coping and positive attitudinal coping were positively correlated with exercise habits. Consumption behaviour in men and avoidance/denial in women were negatively correlated with exercise. Consumption behaviour was also correlated with alcohol intake and inversely related to health eating habits. Solution-oriented behaviour was related to healthy	2. The cross-sectional study design makes determining causality impossible.	

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						eating in men and women.		
Lockwood, A. & Saunders, B.	1993	Cross-sectional survey in combination with registry data.	28	26	93%	1. The general reason reported for the rejection of the draft policy was that the university simply did not want it in its proposed form. There was little consensus between and within divisions about many components of the draft, and since major policy decisions at Curtin generally follow a reasonable democratic process, it had to be rejected. On the other hand, three respondents believed that people were not able to understand that some aspects of the draft policy were 'just new for old', in that existing policy was included among new initiatives. 2. Most respondents were critical of the tone of the document; they thought it was prohibitionist, derogatory and accusatory (of academics), unnecessarily prescriptive and restrictive, wowserish, repressive, patronising and paternalistic, judgemental, interfering in personal and corporate life, and punitive and disciplinary rather than supportive. A common theme was illustrated by reports such as: 'it is manifestly proposing that the university is entitled to engage in social engineering ahead	1. Very small sample might affect the outcome of the survey. The imminent cautions are that there might have been some opinions that were missed. With this small sample it would also be problematic to keep confidentiality, especially within a confined environment of a university.	4

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						of state and other legislature', and 'in a university, freedom is more important than prevention'. 3. Almost half of the respondents questioned basic assumptions within the draft, saying for example: 'is it accepted that Curtin has a role-model function in prevention?', 'as an educational institution shouldn't Curtin educate drinkers to be responsible and even teach young people to drink safely?' and 'why does the draft fail to recognise the positive outcomes of alcohol use at Curtin?'. 4. Others believed that the content was culturally inappropriate to Australian society and to the university. 5. The most commonly reported expected outcome of the draft policy was that it would be detrimental to the majority in order to address the problem of a few. Specific concerns were raised about enforcement, inappropriateness of the peer-watchdog role, and new roles for some staff. 6. A majority of respondents considered that the principal process problem was lack of effective consultation. Lack of early consultation resulted in perceived ownership of the policy		

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						by the working party, not by the university, much less by the majority of those who would be affected. Members of the working party were seen as reluctant to shift ground on any important issues and the modifications made to the policy following consultation were regarded not as genuine, but as merely cosmetic. 7. A common suggested alternative to a new policy was the establishment of good rules, regulations and work practices.		
Macdonald, S.	1995	Cross-sectional	2 468	882	36%	1. A few items reflecting normative regulation of drinking were significant when comparing problem drinkers with non-problem drinkers. 2. Several items reflecting quality and organisation of work were significant, especially dangerous/hazardous working conditions. 3. Items reflecting drinking subcultures factors were significant. However, when a more conservative approach was employed accounting for type 1 errors, only items reflecting availability and social drinking among co-workers remained significant.	1. On limitation of the present study relates to its cross-sectional design, a design that makes it virtually impossible to determine causality. 2. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use. 1. Lack of more specific information on factors directly associated with each job accident.	4

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						4. Comparisons of respondents with or without a drug problem provided some support for quality and organisation of work and drinking subculture. Accounting for type 1 errors, only items reflecting lack of job complexity and social drinking among co-workers remain significant. 5. Overall, it appears that the drinking subculture component of Ames and Janes framework was the strongest element from these analysis.	2. The low response rate that reduces the generalisability of the study results.	
Macdonald, S., Lothian, S. & Wells, S.	1998	Cross-sectional survey	2 468	825	33%	1. 37 or 825 people reported work injuries during the previous year and 19 had multiple injury episodes (in more than one setting). 2. Those who reported multiple injury episodes were significantly more likely than those with no injuries to smoke, report alcohol problems and report other drug use (licit and illicit). 3. The multiple injury group did not differ from the work injury group for any variable. 4. Education levels were significantly higher for those who had injuries at home as compared to those who injured themselves at work.	1. On limitation of the present study relates to its cross-sectional design, a design that makes it virtually impossible to determine causality. 2. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use. 3. Lack of more specific information on factors directly associated with each job accident.	4

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							5. The low response rate that reduces the generalisability of the study results.	
Macdonald, S., Wells, S. & Wild, T.C.	1999	Review & cross sectional survey.	2 468	825	33%	1. A few items reflecting normative regulation of drinking were significant when comparing problem drinkers with non-problem drinkers. 2. Several items reflecting quality and organisation of work were significant, especially dangerous/hazardous working conditions. 3. Items reflecting drinking subcultures factors were significant. However, when a more conservative approach was employed accounting for type 1 errors, only items reflecting availability and social drinking among co-workers remained significant. 4. Comparisons of respondents with or without a drug problem provided some support for quality and organisation of work and drinking subculture. Accounting for type 1 errors, only items reflecting lack of job complexity and social drinking among co-workers remain significant. 5. Overall, it appears that the drinking subculture	Several limitations was raised by the authors. 1. Use of self-reported data on drug and alcohol use, which is known to be subject of underreporting. 2. Exploratory analyses were employed, with numerous *t* tests conducted. A limitation of this approach is that the likelihood that a null hypothesis will be falsely rejected (type I error) is increased considerably. 3. Another limitation of the present study might be related to the items used. Items were written on the basis of their face validity. Use of validated and reliable scales would allow for stronger conclusions. 4. The low response rate has a	

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						component of Ames and Janes framework was the strongest element from these analysis.	negative effect on the representativeness of the study findings. 5. The cross-sectional study design limits the possibility to determine causality.	
Mangione, T.W., Howland, J., Amick, B. et al.	1999	Cross-sectional survey	9 211	6 540	71%	1. The relationship between drinking and injury on the job was U-shaped, with the highest rates of reported injuries occurring among abstainers, and among heavy drinkers, and lower rates for respondents in the intermediate drinking level categories. We ran *t* – test contrasts for each category of drinker and found that abstainers were significantly different from each level except heavy drinkers. The relationship between drinking category and work problems is strongest for late to work/early to leave for doing less work. 2. Three drinking variables were independently, positively and significantly associated with the dependent variable: drinking at work, scoring high on the CAGE, and frequency of drinking to get high or drunk. 3. Among those variables that we included because of their potential confounding	2. The study relies upon self-reported drinking data, a source found to be contaminated by underreporting of alcohol use. A number of other limitations have been raised by the authors. 3. Data of on-the-job drinking also includes drinking at company sponsored events, some of which could have involved non-work situations. 4. The dependent variable has a relatively low coefficient alpha of reliability, because the variety of job performance indicators used do not necessarily correlate together. 5. Because the study was cross-	3

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						relationships, we found several significant relationships. Job satisfaction and health status were negatively related to problems. 4. Among the demographic characteristics, age was significantly and negatively associated with work performance problems, and having children at home was positively associated with work performance problems. Gender and years at current job were not significantly associated with the number of work performance problems. 5. Job characteristics also showed mixed results. The more hours worked per week at the company the more work performance problems there were. Also, working the evening or rotating shift (relative to the day shift) were negatively associated with work performance problems. Working the night shift, however, was not statistically significant, nor was position in the management hierarchy.	sectional, it is impossible to disentangle the causal order of the relationship between drinking and work performance problems.	
Martin, J.K., Roman, P.M. & Blum, T.C.	1996	Cross-sectional survey.	4 817	3001	62%	1. Employees are significantly more likely to report job-escape justifications for drinking if they indicate usually drinking with co-workers or report the frequent consumption of alcohol	1. A relative low response rate of 62% might affect the representativeness of the results in the organisation.	2

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						when co-workers socialise. 2. These data also indicate that job-escape drinking is less likely when employees have supportive supervision. However, there is little evidence that supervisory support operated to reduce the adverse effects of job pressure. 3. When the two indicators of social support at work enter the model, the positive effect of job pressure is only nominally attenuated and retains statistical significance. 4. Consistent with out hypothesis, there is evidence that - net of the influence of several organisational, occupational, and individual-level controls – characteristics of jobs, level of social support, and participation in work-based drinking networks affect the presence of job-related maladaptive justification for drinking. 5. Three of seven control variables have important influences on problem drinking status. Women and workers employed in larger organisations are less likely, and employees in extractive/construction industries are more likely to be classified as potential problem drinkers. 6. Employees who agree with the three job-	2. The cross-sectional design makes determining causality very difficult. The authors have themselves noted an additional limitation of the present study. 3. Only one potential source of social support at work were examined. It is possible that social support obtained in alternative domains (e.g., the family, church, etc) is more central to the management of work-based stress.	

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						escape justification for drinking are significantly more likely to score 2 or higher on the CAGE screen. 7. Having a greater skill description negatively influences problem drinking status. 8. Having supportive co-workers significantly reduces the likelihood of being classified as a problem drinker, and the frequency of drinking when co-workers socialise away from work positively influences problem drinking.		
Mastrangelo, P.M. & Jolton, J.A.	2001	Cross-sectional survey.	201	173	86%	Approximately 21% of participants reported recent OTJ abuse and were significantly more likely than non-abusers to exhibit other counterproductive work behaviours.	1. Very small sample size. The authors have raised some concerns about limitations of the present study. 2. Using college students' self-reports of substance abuse is convenient, and is arguable an effective method of measuring on-the-job substance abuse. However, it is not clear as to whether a student responds to an integrity test for course credit in the same manner as he or she would responds to an integrity test for course credit in	4

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							the same manner as he or she would respond to the test for an actual job. Likewise, a sample of college students may contain a higher prevalence of drug and alcohol users than would a sample from the population at large.	
McDonnell, R. & Maynard, A.	1985	Econometric analysis	N/A	N/A	N/A	1. Definitial problems in the alcohol field are enormous. There are many physical, mental and social problems that are not related to dependence and alcohol dependence only constitutes only a small part of alcohol related problems. 2. Lost production is often believed to be a significant social cost of alcohol abuse. It can arise in a number of ways – reduced efficiency at work, tardiness, sickness absence, unemployment and premature death. Alcohol misuse has been closely associated with industrial accidents. Fragmented evidence indicates that the cost of alcohol abuse to industry is of considerable significance. It has been estimated that two percent of the working population are alcohol misusers and	The authors have raised the following concern regarding estimations of costs related to alcohol use. 1. These figures are extremely crude and conservative and should be used cautiously because of the poor database: estimates of the social cost of alcohol misuse are only as good as the epidemiological knowledge on which the costings are based upon.	1

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						alcohol associated costs to industry have been variously put between £350 million and £500 million. 3. In order to estimate the social cost of alcohol abuse to industry, days of lost production associated with the use of alcohol must be identified. A monetary value of daily output is then needed to cost these days. The value of an employee's output can be equated to the amount an employer is willing to pay for him or her. This is his/her gross earning plus employer's on-costs (national insurance contributions, superannuation payments, etc.). 4. In order to estimate the cost of alcohol realatd sickness absence it has been assumed that people experiencing spells of sickness took 12 days sickness absence over the years. This leads to a conservative estimate. Using these assumptions a tentative estimate of the cost to society of alcohol related sickness absence is of the order of £176.07 million (low) or £404.40 million (high).		
McVicar, R.H., Pearson, S.J.,	1995	Review	N/A	N/A	N/A	1. In reviewing the social and economic costs of workplace substance abuse, one is struck by		

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Jacobs, P., et al.						three major problems: (1) the variety of vocabulary used to describe costs, (2) the confusion created by lack of consistency and cohesiveness, and (3) the inconsistent logic regarding the inclusion or exclusion of an item as a cost under various circumstances. 2. The causality and attribution issues are as complex as the estimation of prevalence. The effects of substance use are cumulative, so age is important. Many studies does not distinguish between causality and association, and there are significant differences between men and women in terms of the effects, the reliability of self-reported data, and the stigmatisation associated with alcohol abuse. 3. Among the articles reviewed, there is consensus that the loss of industrial production is a problem of alcohol and drug abuse as well as the loss from premature death. All other problems can be considered subset of these two. For example, absenteeism would be covered under loss of production, and fatal accidents under premature death. The exception is unemployment due to alcohol and drug abuse. To the extent that an unemployed member of		

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						the economy replaces the abusing worker no loss of production should be assessed.		
Metcalfe, C., Davey Smith, G., Sterne, J.A.C. et al.	2003	Cross-sectional longitudinal survey.	10 040	6 344	63%	1. Job change was collected again for 2 973 (30% of the initial sample) males and females who took part in a second screening 4-7 years after first. At the second screen 24% of respondents reported one or two fewer job changes than they had reported at the first screening with a further 6% of respondents reporting 3 or more fewer changes job changes at the second screen. 2. Those individuals who reported having experienced frequent job change were more likely to smoke, consume greater amounts of alcohol, and perhaps exercise less. Similar findings were observed in both males and females, and for different age and socio-economic groups. 3. We found no suggestion that this association was due to higher levels of psychosocial stress, and the expected consequences for health was not observed.	The authors raise the following reservation of their results. 1. Interpretations of these findings are not straightforward due to an uncertain direction of causation, and a possible selection bias. 2. Relative low response rate.	3
Midanik, L.T.,	1996	Cross-	43 809	22 102	50%	1. Generally, the risk for job problems is	1. Cross-sectional data make it	2

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Tam, T.W., Greenfield, T.K. et al.		sectional survey		Current drinkers		significantly lower than the other two areas at 2.5 drinks per day and higher levels of alcohol consumption. 2. Based on the findings from the logistic analysis indicating significant interaction effects for age and volume of alcohol, risk curves were plotted by three age groups: 18-30 years olds, 31-45 year olds, and 46 year and older for ICD-10 dependence and drunk driving. While the curves for these two areas differ, age is inversely related to risk. Younger individuals have higher risks of both types of problems at every consumption level followed by the middle-aged group, and then the oldest group. As indicated by the confidence limits for ICD-10 dependence, the youngest age group's risk curve is significantly different form the other two at moderate levels of drinking (1.5 – 2.5 drinks/day) whereas the curve for the younger drinkers for drunk driving is generally significantly different at lower and moderate levels of drinking.	impossible to determine direction of causality. 2. Relative low response rate. The authors have raised a couple of limitations in the present study. 3. The data did not contain a wide range of alcohol-related consequences, e.g., relationship problems, from which additional comparisons could have been made. 4. The dependent variables were based on dichotomised items which did not take into account severity of a specific consequence.	
Moore, R.S.	1998	Review	N/A	N/A	N/A	1. A brief review of the literature indicates key features of hangovers: the factors that help produce them, their possible connection to		

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						the development of alcohol dependency problems, and the physical and mental impairments that accompany some hangovers and pose a risk for the workplace. 2. Studies of hangovers are rare in the alcohol research literature, and research on hangovers in the workplace has been even sparser. 3. In a survey 786 male workers age 21-59 representing a variety of occupations, Hitz (1973) found that 22% of the sample had missed work in the previous year because of a hangover. 4. Most of the literature eon hangovers has concentrated on the performance impairments they cause, and little of it has focussed on interpersonal relations. Ames, Grube and Moore (1997) found in a survey of 832 heavy machinery assembly workers that experiencing hangovers at work was significantly associated with having conflicts with co-workers and supervisors, among other problems. 5. Without a clear policy on hangovers in the workplace, each case is open to interpretations to policy enforcers. Much of the confusion is due to the wide-open		

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						definition of hangovers: a hangover can refer to anything from a headache the day after a night of drinking to the extremes of reeking of alcohol and still being under the influence. 6. Cross-cultural research suggests that a precise definition of "hangover" will remain elusive. Whereas there is a great deal of overlap in the symptoms encompassed by the terms for hangover in different languages, there are substantial differences as well.		
Moore, S., Grunberg, L. & Greenberg, E.	2000	Cross-sectional survey	3 676	2 279	62%	1. There are more significant relationships to alcohol problems among the demographic, work attitudes, and well-being variables as compared to the work outcome measures. 2. The relationship between drinking problems to the demographic variables is monotonic, with abstainers showing significantly lower (or higher) levels of five of the six demographic variables. As compared to drinkers with no problems, abstainers were older, had fewer years of education, earned less money, and were less likely to have a parent with an alcohol problem. 3. Of the nine dependent measures presented in this paper, two variables, mastery and bad	1. Average response rate. 2. Data collected from one worksite limits the representativeness of study results. 3. Cross-sectional study design make it impossible to determine direction of causality between different variables (e.g., between self-reported health and alcohol problems).	2

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						health, generally demonstrated a linear trend. Less mastery and greater numbers of self-reported health problems were associated with greater alcohol problems. 4. Abstainers and drinkers with no reported problems (CAGE = 0) were not significantly different from each other. Only when one (bad health) or two (mastery) alcohol problems were reported were comparisons to abstainers or drinkers without problems first noted. The variable goof-off also reflected a linear trend with respondents at CAGE = 2 and CAGE = 3 reporting poorer use of work time than those who drink but report no problems. This would indicate that there might be more of an ability than previously speculated for problem drinkers to admit to performing poorly to evaluate themselves poorly, regardless of the dimension being assessed. 5. The respondents with the greatest number of reported problems (CAGE = 3 or 4) reported significantly less general job satisfaction, more intent to quit, and greater general job stress as compared to all other groups. Further, for each of these variables all other group comparisons were non-significant.		

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Moore, S., Grunberg, L. & Greenberg, E.	1999	Cross-sectional survey.	3 700	2 266	61%	1. There is a slightly different pattern of findings by gender and managerial status (the reader should recall that there are substantially different *Ns* for each group). For example, among men non-managers, younger, single participants reported higher amounts of drinking, and greater numbers of alcohol-related problems. 2. Among women managers however, older, married (p = .06) respondents reported relatively more drinking and related problems, respectively. 3. Higher income was associated with greater drinking for both managerial and non-managerial men, but not for women. 4. Alcohol problems were also significantly different by group, F (3, 1826) = 4.3, p = .005, with post hoc tests showing that managerial men reported more problems then did non-managerial women. 5. Escape motives for drinking were not significantly different by group. 6. Furthermore, drinking alone and drinking immediately after work appeared to pose	1. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use. 2. No analysis of potential confounding variables. 3. The cross-sectional study design makes it impossible to draw any conclusions regarding causality.	3

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						greater problems for managerial women than for other groups studied. Surprisingly, these results were found even when controlling for escapist motives for drinking and alcohol consumption rates. That is, even taking escapist motives and the amount of alcohol consumed into consideration, drinking alone and immediately after arriving home from work were associated with significantly higher alcohol-related problems as compared to women non-managers.		
Murphy, S.A., Beaton, R.D., Pike, K.C., et al.	1999	Cross-sectional longitudinal survey.	?	188	?	1. The findings of the current longitudinal study showed statistically significant changes in 5 of 19 (26%) occupational stressors measured. 2. Statistically significant positive changes (decreases in perceived work stressors over time) were noted in terms of fewer job skill concerns and fewer concerns about reduction in force and benefits. 3. Negative changes (increases in the appraisal of each stressor) were noted for 14 of 19 (74%) of the job stressors examined, with 3 reaching statistical significance, namely financial concerns and less social support both at work and at home. However, none of these changes were of a magnitude (± .5 S.D.) considered to	The authors' comments on a couple of shortcomings in the present study. 1. The study sample is relatively small and comprised fewer than 50% of the potential sample of all personnel in both participating departments. Therefore, the finding may not be representative of urban firefighters' experiences in the northwest United States or even these two departments. 2. Timing of the data collection might also account for the	4

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						be clinically significant. 4. It is difficult to explain the rather dramatic decline in perceived social support at home between the baseline and the two-year follow-up assessments. While it is worth noting that perceptions of at-work social support also declined during the same time frame, they did so for only the department involved in labor-management strife. Thus, it is possible that the decline in perception of social support at home reflected a spillover effect from perceived job dissatisfaction and increased sources of stress. It is possible that a perceived decrease in social support at home is "safer" than a decrease in social support at work given the life-and-death responsibility and heavy reliance upon teamwork. 5. Several symptoms of stress increased and reported problems with alcohol decreased during the period. 6. The incidence of stress-related disorders was not only high at baseline; it was higher on many SOS scales than community norms and did not decline over the two-year surveillance period. 7. Although the prevalence of alcohol caseness	results obtained. It is possible the participants became familiar with the questionnaire items and this might have resulted in some individuals reacting differently to the items (e.g., test-taking reactivity). 3. Measuring change over time presents a host of other methodological problems, such as historical changes and regression towards the mean. Paired *t*-tests may not be the most sensitive analytic strategy, and finally one must be careful to differentiate between statistically and clinically significant change.	

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						declined significantly from baseline to the two-year measurement assessment, it was still nearly 30% at follow-up. 8. The elevated levels of stress symptoms and possible alcohol problems could affect length of employment, health status following retirement, and, ultimately, health care costs of urban fire service personnel.		
Neil, C.C.	1989	Cross-sectional survey.	1 388	418	30%	1. Strong statistically significant relationship exists between two indicators of predisposition towards alcohol abuse and both frequency of drinking and the reporting of symptoms of alcohol dependency. The personal-effects drinker was more likely to be a daily drinker, and the higher he scored as a personal-effects drinker, the more likely he was to report dependency symptoms. 2. Older men were more likely than others to drink daily, although the mean ages of those in different drinking frequency categories suggests a non-linear relationship between age and drinking frequency. Drinkers reporting different number of symptoms of alcohol dependency also differed significantly in terms of age, older men being more likely to report no symptoms and those in the age 20-39	1. Relatively small sample and low response rate could affect the representativeness of the study results. 2. The survey does not investigate drinking levels, this would in turn make it difficult to determine the impact of alcohol use among all those not defined as alcohol dependent. 3. The survey relies on self-reported data on alcohol use a data source associated with underreporting of drinking levels. 4. The cross-sectional design make it very difficult to determine causality.	4

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						group being most likely to report four or more. 3. Results indicate that those with a supportive supervisor were less likely to experience workplace problems but were more likely to drink daily. Supervisory supportiveness, however, had no influence on the association between workplace problems and frequency of drinking.		
Niedhammer, I., Goldberg, M., Leclerc, A., et al.	1998	Longitudinal Cross-sectional survey.	45 833 (1989) 15 263 (1995)	20 625 (1989) 13 226 (1995)	45% (1989) 87% (1995)	1. Psychosocial work factors were significantly associated with hypertension, hyperlipidaemia, overweight, smoking, and alcohol consumption, but not with diabetes. 2. In men, low decision latitude was associated with hypertension, high decision latitude and high social support with overweight, low decision latitude with alcohol consumption. 3. In women, low decision latitude was related to hyperlipidaemia, high psychosocial demands with overweight, high psychological demands and high decision latitude with smoking, and low social support with alcohol consumption. 4. These cross sectional results underline the potential effects of psychosocial work characteristics on cardiovascular risk factors	The authors have raised concerns about some shortcomings of the present study. 1. Assessment of psychosocial work factors were based on self-reporting, which reflects only partly objective work environment. 2. Cardiovascular risk factors were also assessed by self-reporting. 3. The classification of subjects with regard to the exposure to psychosocial work variables was based on a single evaluation rather than on the individual's cumulative work history.	2

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						and the differences between the effects of job stress in men and women, and confirm the direct mechanisms (through physiological variables) and indirect mechanisms (through behavioural risk factors) potentially involved in the relation between psychosocial work characteristics and cardiovascular disease.	4. The cross-sectional design make it difficult to determine causality. 5. The main concern was to avoid a spurious relation between psychosocial work variables and cardiovascular risk factors resulting from confounding factors.	
Nowack, K.M. & Pentkowski, A.M.	1994	Cross-sectional survey.	3 178	879	28%	1. Self-reported drinking, smoking and drug use were only modestly correlated with each other in this sample. 2. Employed women with higher levels of drinking reported significantly lower quality overall lifestyle practice, eating/nutrition habits, and more frequent use of avoidant coping strategies in the face of work and life hassles compared to non-drinkers. 3. The study indicates that professional working women who practice poor lifestyle and health habits appear to be at risk of experiencing job burnout.	A number of limitations of the present study have been raised by the authors. 1. The national sample within the dental health profession was cross-sectional in nature and self-selected. As such it may not be highly representative, hence generalisable, to all professional working women outside dental health care. 2. The use of self-reported data means that the study is subject to social desirability response bias, deception or distortion.	3

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							3. Due to the cross-sectional design it is impossible to determine causality. 4. The measures of smoking, drinking and other drugs used in this study may be criticised as single-item scales that lack specificity and established validity.	
Park, H., Sprince, N.L., Jensen, C. et al.	2001	Cross-sectional survey.	5 028	3 620	72%	1. Occupation was significantly associated with three of the seven measures of primary preventive behaviour, including smoking and binge drinking. 2. Farmers were less likely to report binge drinking than were labourers.	1. The cross-sectional design makes it virtually impossible to determine causality. The authors themselves have reported a couple of shortcomings of whom one is the use of self-reported data which increases the possibility of misclassification bias. Using self-reported data has also been found to be a source of underreporting alcohol use. 2. Because data were collected through telephone interviews 3.7% of households that did not have telephone were excluded.	3

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							3. This is a one area survey and as such it is difficult to know whether the results can be generalised to other settings.	
Peele, S. & Brodsky A.	2000	Review	N/A	N/A	N/A	1. Possible links between moderate drinking and success at work include better physical health and psychosocial adjustment for the individual, as well as a greater involvement in employment-related social experiences by drinkers. The drinking-health-work connection is reflected in studies of work attendance and disability by drinking levels. 2. When experiencing stress, abstainers were significantly more likely to be absent than moderate drinkers, comparing with excessive drinkers no significant difference were found between abstainers and heavy drinkers. This would lead us to the conclusion "abstinence is at least as unhealthy as excessive drinking". 3. A study by Månsson et al. (1999) found during an 11-year follow-up that abstainers had the highest RR (1.8) for receiving a disability pension, with low consumers as the index; high consumers had an intermediate RR (1.3).	1. The lack of descriptions regarding methods used to find and include articles in the review. A shortcoming shared by the vast majority of reviews included in this review.	

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Pollack, E.S., Franklin, G.M., Fulton-Kehoe, D. et al.	1998	Cohort and registry study.	?	7 895	?	1. 422 of the construction workers had a diagnosis of substance abuse during the two-year period. 2. The greatest difference appeared in the 25-34-years age group, in which those with a diagnosis of substance abuse showed an excess risk of serious injury of 93% over that for those without such diagnosis. 3. A more accurate statement of the results is that there is an injury risk ratio of 1.93 (95% CI, 1.27-2.59) for the 25-34 age group and virtually no difference in risk for the other three age groups. 4. To compare the kinds of serious injuries experienced by those with and without substance abuse diagnosis the authors used the American National Standard Institute Z16 codes contained on the workers compensation records for type of injury, nature of injury and to what part of the body. Because there were only 44 workers with substance abuse diagnosis who had time-loss injuries, the numbers are too small to allow definitive conclusions to be drawn from these comparisons.	1. Finding in this study may be impossible to compare to other studies because according to the authors the way people with substance abuse varies. 2. 85% of the workers in the substance abuse group consisted of participants with a diagnosis of an alcohol-related disorder. This would exclude those who have not been diagnosed but who still have some alcohol related problems. 3. The authors counted injuries among those with a diagnosis of substance abuse only if the injury occurred after the diagnosis of substance abuse. This would, again, exclude those who have not been diagnosed but who might have been intoxicated at the time when the injury occurred. 4. Register data were only available to those who were	4

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							union members and who had participated in a pre-selected treatment program. This excludes non-union members and those who either refused treatment or had the treatment financed by some other source than the union. 5. And as acknowledged by the authors it is possible that there may be a number of employees with substance abuse problems that have never sought treatment and as such is impossible to detect in their analysis.	
Pritchard, C. & McCarthy, A.	2002	Cross-sectional survey.	200	92	46%	1. 95.6% of all companies in the survey had a written safety policy this was in turn correlated with the size of the organisation (*P* > 0.05). 2. Very few companies (19.8%) provided an occupational health service for their employees. Of those providing a service, there was little correlation with the size of the company because 16.7% (*P* < 0.05) of such	1. Low response rate would affect the representativeness of the study results. 2. No analysis regarding why the low response rate. 3. Data comes from one type of industry and this raises questions to how these results compare with other industries	3

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						services were provided in companies employing only 11 to 20 employees. 3. Within the sector, 25.3% had a smoking policy and 22.8% had an alcohol policy. 4. Restrictions in relation to alcohol were onerous, with 80.4% having a total ban of alcohol at the workplace, 12% had no restrictions at all. Only 10% had a code of practice for dealing with employees who have an alcohol problem; of these, half resulted in the draconian measures of dismissal, suspension, or written warnings. A total of 98.9% of the respondents agreed or strongly agreed that the consumption of alcohol during working hours could result in an increased risk of injury, and 95.6% agreed or strongly agreed that productivity and decision-making could be adversely affected by lunchtime drinking.	and what are the implications of that potential difference. 4. Little discussion about the potential for confounding variables that might have affected responses, as well as response rates.	
Ragland, D.R., Greiner, B.A., Krause, N. et al.	1995	Cross-sectional survey.	1 853	1 820	98%	1. The percentage of heavy drinkers was lowest in the youngest and the oldest age groups; the two central age categories were significantly higher than the youngest, and there was a significant non-linear pattern of association. 2. Ethnicity was strongly related to both indicators of alcohol consumption.	1. Data for this study comes from one organisation and therefore the results might not be applicable to other work settings. 2. The study uses self-reported drinking data, a data source	2

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						3. Men were much more likely than women to report heavy alcohol consumption. In fact, of 151 female operators only 1 reported drinking 15 or more drinks per week, in contrast to almost 10% of the males. Males reported more than double the average alcohol consumption per week of females. 4. Anger and depression, measured as possible coping responses to job stress, were both very strongly correlated with perceived frequency of, and reaction to, various job stressors. 5. The time of shift was strongly related to both measures of consumption. Compared with the regular starting time (i.e., day shift), operators working the "night" shift and the "owl" shift were substantially less likely to report heavy alcohol consumption and reported lower average consumption. 6. Preference for the same, more, or fewer hours, a variable reflecting work satisfaction, was related to both measures of consumption. Operators who preferred more ours reported about the same consumption as operators who preferred the number they had, but operators who preferred fewer hour were substantially more likely to report heavy	found to produce underreporting in alcohol use. The authors raise an additional shortcoming of the present study. 3. Given the cross-sectional nature of the survey, many of the results have alternative interpretations.	

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						consumption and reported higher average consumption. 7. The time spent with peers after work and the time to unwind were both strongly related to reported consumption. Both of these variables showed increasing consumption with increasing time. 8. Two variables reflecting specific job problems (i.e., specific job stressors) experienced by the operators were strongly related to alcohol consumption. Indices reflecting (a) the frequency of job problems and (b) the operator's reaction to the problems were both strongly related in a stepwise fashion to the likelihood of heavy drinking and to average consumption. 9. Job decision latitude, job demands, and a variable reflecting the combination of these (i.e., low latitude/high demands, compared with the other three possible combinations), there were no significant results.		
Richmond, R.L., Wodak, A., Bourne, S., et al.	1998	Cross-sectional survey.	1 206	688	57%	1. 36% of men and 11% of women reported drinking alcohol at levels considered hazardous or harmful.	1. Descriptive data does not inform the reader about potential correlation between different variables.	3

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						2. Younger respondents were more likely to report drinking hazardously or harmfully, were smokers and had multiple risk factors. 3. A majority of respondents thought that their employer should be interested in employee's lifestyle issues, particularly excessive drinking (63%). 4. Few considered seeking advice from the workplace regarding smoking (16%), weight (25%) and excessive alcohol consumption (12%). 5. The main conclusion is that many of Australia Post employees have unhealthy lifestyle behaviours. While employees perceive that the workplace has an important role in promoting healthy lifestyles among staff, few are presently willing to seek advice from the workplace regarding these issues.	The authors have raised a number of limitations in the present study. 2. It is unclear how representative the sample was of APOST employees in Sydney. 3. The anonymous nature of the screening caused an inability to correct for missing data. 4. Because of the focus of the study was mainly on alcohol consumption, measures of other lifestyle factors were not as comprehensive. 5. The nature of this field of study, particularly the time constraints on the postal workers and the requirement of anonymity, made it impractical to objectively validate the self-reported data.	
Richmond, R.L., Wodak, A., Kehoe, L. et al.	1998	Cross-sectional survey.	956	852	89%	1. Excessive drinking was significantly more prevalent among men than women (X^2 = 4.6; df =1; p < 0.05). There were 8% of men and 15% of women who did not drink any alcohol.	1. The study relies upon self-reported data on alcohol use, a source of information found to be biased by underreporting.	3

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						2. Almost half of the respondents (48% men and 40% women) were drinking alcohol excessively (i.e., hazardous + harmful + binge) with even higher proportions among police aged 18-39 years (52% men and 43% women). 3. About two-fifth of men and one-third of women reported binge drinking in the present study.	2. The cross-sectional study design make it impossible to determine causality between different variables (e.g., stress & alcohol use). 3. Data comes from one occupation and therefore the results may not be applicable to other occupations.	
Roberts, R.	1988	Cross-sectional survey.	3 000	1 473	49%	1. Evidence was obtained which suggested that social desirability factors influenced the reporting of particular levels of consumption. Of the 27% of the total sample who described their previous week's consumption as untypical, 88.9% of these (N=353) said they normally drank less. 2. Subjects indicated a confused mixture of attitudes toward alcohol use. They considered there to be more negative than positive aspects to alcohol use. Side by side with these concerns about drinking, many respondents have very favourable views towards alcohol consumption; concerning how sensible it is to drink, drinking to be sociable, drinking being good for one's health.	1. Cross-sectional survey design makes it virtually impossible to determine causality. 2. Relative low response rate will limit the representativeness of the study results. 3. The author does not discuss the potential impact of confounding variables that might affect the study results.	3

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						3. There was evidence that subject's attitudes and/or behaviour with regard to alcohol, would not be easily amenable to change. Given a list of possible health issues on which initiatives could be made at work, alcohol was deemed to be one of the least popular, behind diet, exercise, smoking and stress. Only A.I.D.S. was less favoured. 4. Alcohol consumption was noted to increase in almost a linear fashion from Monday to Saturday. The usual peak times for drinking at the weekend can to some extent be explained as a social norm, but there is no obvious reason why drinking should increase throughout the working week. A possible reason is that the respondents are dinking to relieve the stresses that mount up during the week. Stress is very definitely perceived to be a problem. It was the most popular choice (selected by 84.6%) for workplace initiatives aimed at improving health.		
Roberts, R., Cyster, R. & McEwen, J.	1988	Cross-sectional survey	3 000	1 473	49%	1. The workforce sample here contains a smaller proportion of non-drinkers than in other surveys. Amongst the sample, 93.3% reported currently drinking alcohol with 6% declaring	1. Cross-sectional survey design makes it virtually impossible to determine causality. 2. Relative low response rate will	3

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						themselves to be abstainers. National figures obtained in other surveys indicate abstainers to comprise approximately 10% of the population. 2. Significant differences were found in total weekly alcohol consumption between the sexes (t = 9.15, P < 0.0001). 3. Overall subjects indicated a confused mixture of attitudes toward alcohol use. First of all they considered there to be considerable more negative than positive aspects to alcohol use (3.646 cf 2.434, n = 1437, t = 23.47, P < 0.0001). (This was true for both men and women, but there were noticeable differences: the men considering there to be more positive aspects than the women (2.511 cf 2.286, t = 2.39, P = 0.017) and the women more negative aspects than the men (3.860 cf 3.536, t = 2.61, P = 0.009). Additionally, one third of those who did drink (n = 500, 33.9%) had at some time thought about reducing their alcohol intake. Of these, almost three-quarters (n = 368, 73.6%) had actually tried to cut down. Eighteen percent of respondents had experience of other people's drinking causing problem at work.	limit the representativeness of the study results. 3. The author does not discuss the potential impact of confounding variables that might affect the study results.	

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						4. When asked whether they would be in favour of their being initiatives aimed at improving health on a number of issues, people put stress (84.6%), smoking (77.5%), exercise (77.1%) and diet (75.7%), ahead of alcohol (67.5%). Alcohol was thus one of the least favoured issues on which people wished to change behaviour to improve health. 5. Not only were a number of respondents reluctant to change their behaviour with regard to alcohol in relation to their health, evidence also indicated that they would find it very difficult to do so. 6. Generally, employees also demonstrated less confidence in dealing with problems caused by alcohol at work, as witnessed by the coming institution of the smoking policy in response to workforce pressure and the stated unwillingness to act on one's own initiative when asked what would they do if they suspected that one of their colleagues had a drinking problem. A common response to this question was to hope that someone senior would notice (35%). A further 12% admitted that they would do nothing. It is a distinct possibility that this may be because many		

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Author	Year	R.D.	S.S.	R.R.	RR %	Key Findings	Main Shortcomings	R
						employees have experience of someone senior to them having fondness for drink.		
Rout, U. & Rout, J.K.	1997	Cross-sectional survey.	1 030	511	50%	1. Alcohol consumption by British GPs was found to be more than their Canadian counterparts, which is a cause for concern. 2. It was revealed that British GPs reported higher levels of stress and Canadian doctors. This is perhaps due to a great many changes than have taken within a short period win which they have been working in an uncertain environment. 3. The main sources of stress among the doctors of both countries are: time pressure, dealing with problem patients and the demands of the job on family life.	1. Relative small sample and low response rate would affect the representativeness of the study results. 2. The use of self-reported drinking data is a potential source of bias since it is known to be affected by underreporting of alcohol use. 3. The cross-sectional survey design makes it impossible to determine direction of causality.	3
Roxburgh, S.	1998	Cross-sectional survey.	985	719	73%	1. Comparison of mean indicate that there are no significant differences between men and women in terms of perceived job control and job routinisation. However, men work longer hours in more complex jobs, report higher perceived noxiousness, have higher substantive complexity, and perceive lower demands and lower co-worker social support than women.	1. The use of self-reported alcohol use is a known source for underreporting. 2. The cross-sectional design makes it impossible to determine causality. The author raises some concern about a couple of limitations in the present study.	2

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						2. Substantive complexity significantly reduces drinking, suggesting that a higher levels of job complexity men and women consume less alcohol. This effect is significant, controlling for gender differences and the impact of other job conditions on consumption. There is a gender difference in the effect of job noxiousness on consumption and in the effect of perceived demands on alcohol consumption. 3. The significant interaction of job demands with gender indicates that high job demands significantly increase women's drinking but not significantly increase men's drinking. 4. There is no significant difference, however, in the consumption of men and women when job demands are high. Women who perceive their jobs to be high in demands drink significantly more then women who perceive their jobs to be low in demands, whereas men's drinking is unaffected by the level of perceived demands. Thus, when job demands are high, men and women's alcohol consumption converges. 5. Results indicate that there is a significant difference in the consumption of men and	3. The final model only explains 7% of the variance in consumption. 4. Accounting for the variation in the impact of job conditions does not explain away gender differences in consumption, because after controlling for gender differences in the relationship between consumption and work conditions, men still consume significantly more alcohol than women.	

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						women when noxiousness is low and when it is high, such that men consume more under both circumstances. Among women, however, there is no significant difference in their alcohol consumption as a function of perceived noxiousness of the job. For men there is a significant difference , such that men, in jobs they perceive to be very noxious , drink significantly more than do men in jobs lacking in noxious conditions. Thus noxiousness increases men's drinking but does not increase women's alcohol consumption.		
Sacker, A., Bartley, M., Firth, D. et al.	2001	Cross-sectional survey. Path analysis.	17 000	15 470	91%	1. All classes, except lower professionals, had poorer diets than higher professionals, with women in the non-skilled manual class being worst off. Women in the higher professional E-G class were more likely to drink alcohol than all other classes, but were only significantly different from women in the non-skilled manual class. Women in the lower professional and self-employed E-G classes had less job strain than the higher professional class, while job strain was more prevalent in the other classes. All these differences were significant at the 5% level except from the	1. The author's themselves raises the problem with use of cross-sectional data that limits the possibility to determine direction of causality.	2

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						comparison between the two professional classes. 2. It can be seen that alcohol consumption protected against poor health, rather then being detrimental to health. 3. Contrary to expectations, alcohol consumption was associated with good rather than poor health. The U-shaped relationship between drinking and heart disease has been well documented. However, women tend not to drink as heavily as men and so there is little power in this study to detect the effects of excessive alcohol consumption. The linear relationship between alcohol drinking and health imposed by the statistical methods appears to be identifying those who drink moderately compared with those who do not drink at all. This may account for the beneficial effects of drinking on health which was observed, although other studies have found that compared with abstainers, any alcohol use has been found to decrease the risk of diagnosed heart disease in women. Moreover, alcohol consumption was positively associated with participation in sport and with social support, both of which were related to better		

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						health.		
Salomaa, J.	1995	Economic estimate. Register study	N/A	N/A	N/A	1. Between 1980 and 1990 alcohol consumption in Finland grew on average by 2.4% per year, and most of the detrimental effects of alcohol abuse grew faster. 2. The real costs from nearly all alcohol-related detrimental effects grew during the 1980s on average by 1.7-2.4% annually, depending on the item. 3. As a result of the volume and cost development the direct detrimental effects of alcohol abuse grew from FIM 1.0-1.3 billion in 1980 to FIM 2.8-3.7 billion in 1990: i.e., a real increase of 51-56% in the direct costs of detrimental effects. 4. The indirect costs of detrimental effects (production losses, value of life lost through premature death), was FIM 9.9-18.1 billion in 1990. 5. In 10 years the distribution of the costs of direct detrimental effects changed markedly, in particular regarding health and social costs: the share of health costs decreased 6 percentage points, while that of social costs		1

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						increased 10 percentage points.		
Shahandeh, B.	1985	Review	N/A	N/A	N/A	1. Since the end of the Second World War alcohol production and consumption have risen constantly, with more and more countries becoming suppliers, consumers or both. It has been estimated that as many as 65 to 70% of persons with drinking problems are employed. 2. The interaction between the individual, alcohol and the environment constitute a "framework" in which a number of factors may combine to cause dependence. Alcohol may be consumed to offset negative psychological aspects of work such as stress, frustration, monotony and lack of mental stimulation. Four environmental factors have been identified that heavily influence drinking habits separately or in combination: availability (which is considered to the be the most important and powerful factor), social pressure to drink, the high degree of mobility which separate workers from the stabilising influence of home, and relative freedom from supervision. 3. Studies on corporations in the United States		

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						have found that "alcoholics are absent 16 times more often than non-alcoholic employees. 4. Most industrial processes today involve teamwork. Any impairment in one member is obviously bound to have an adverse effect on the work of the team and on its other members. 5. The cumulative effects of alcohol use are a major consideration in any employer's cost-saving efforts. Sickness increases medical costs, absenteeism lowers the availability of manpower and decreases output, deteriorating working relations and the resulting grievances cause losses because of the cost – in both time and money – of adjudicating. 6. Measures to combat substance abuse in the workplace, as in society as a whole, must be based on a comprehensive policy, clear objectives and a coherent strategy. The effectiveness of these countermeasures will depend on an accurate assessment of the extent and nature of the problem.		
Shore, E.R.	1997	Case-	1 499	557	37.3	1. Participants were asked whether, in the 6	1. Low response rate leaving a	3

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		Control. Questionnaire			%	month prior to the survey, they drank for any of the three personal reasons: to ease pain or sleep, to become less depressed or "blue" or to forget problems. At the pretest 24% of the women reported at least one of the behaviours. The control group showed now significant changes over time, but the experimental group showed a significant decline in mean scores from the first to the second questionnaire, a decline that was maintained during the follow-up period. 2. Reported use of alcohol to relieve dysphoric feelings significantly declined in the experimental group and did not change in the control group. Changes that occurred in the experimental group during the intervention were maintained through the 2-year follow-up period. 3. Reported negative consequences decreased in both groups, but the prevention work accelerated by 2 years the change in the experimental group. Given that negative consequences of alcohol use are harmful and can be life-threatening, such acceleration could be beneficial, both to the women and to those around them.	non-representative sample. 2. The study relies on self-reported data on drinking habits a source of information that has been found to be a cause of underreporting of alcohol use.	

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						4. Drinking to relieve depression, forget problems, ease pain or aid sleep may be particularly dangerous because the reduction of uncomfortable states or negative effects can be powerfully reinforcing. In this study, only members of the experimental group reported a significantly decline in such use of alcohol. It appears, therefore, that the newsletter articles, some of which dealt specifically with this issue, were an effective preventive device.		
Shore, E.R.	1994	Cross-sectional longitudinal case-control survey	453 baseline	290 2nd survey 218 3rd survey	64% 48%	1. The majority (88.5%) of the original group drank at least once a year, with 81.5% reporting an average daily consumption of less than 1 ounce of absolute alcohol. Twenty-two of the women (4.9%) drank between 1 and 2.5 ounces per day, and nine (2%) reported consuming 2.5 or more ounces of absolute alcohol per day. 2. As might be expected in a sample with low alcohol consumption, few negative consequences of alcohol use were reported. 3. At the pre-test 24% of the women reported at least one reason for drinking (e.g., to ease pain or sleep, to become less depressed or	1. A non-random sample that could affect the survey results since it is likely that those interested in these issues will participate. It is likely that women with high levels of alcohol use would decline to participate, unless they want to change their drinking habits. 2. A relative small sample. 3. The sample consisted of business and professional women and this might limit the representativeness of the study	2

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						"blue" or to forget problems) six month prior to the survey. The control group showed no significant change over time, but the experimental group showed a significant decline in mean scores from the first (mean =.64) to the second questionnaire (mean =.45, *t* = 3.10,123df, *p* = .002), a decline that was maintained during the follow-up period (mean =.42). 4. Over the course of 5 years, both groups had statistically significant increases in their knowledge of alcohol. The control group showed incremental changes at each control point, while in the experimental group the significant change occurred from pre- to posttesting only, but was nearly as large as that found for the control group over the entire period. The increase was maintained during follow-up. In addition, the experimental group showed a larger gain in knowledge than did the control group.	results since they might be difficult to apply to other occupational settings. 4. Cross-sectional study data makes it virtually impossible to determine direction of causality.	
Single, R., Robson, L, Xie, X., et al.	1998	Economic estimate. Register	N/A	N/A	N/A	1. It is estimated that substance abuse cost $18.45 billion in Canada in 1992. This represents $649 per capita, or about 2.7% of the total gross domestic product (GDP).	1. The fundamental problem with all cost "estimations" is that they are estimations and it is rare to find two studies that	1

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		study				2. As in a majority of economic cost studies the largest single cost is the indirect cost of productivity losses due to substance abuse. 3. Alcohol accounts for more then $7.5 billion in costs or $265 per capita. This represents 41% of the total costs of substance abuse. 4. The largest economic costs of alcohol are $4.14 billion for lost productivity due to morbidity and premature mortality, consisting of $1.40 billion in productivity losses due to alcohol attributable morbidity and $2.74 billion in productivity losses due to premature mortality. 5. More than $1.30 billion is spent on direct health care costs attributable to alcohol. This includes $660 million for treatment in general hospital, $180.9 million for residential care, $127.4 million for physician fees, $95.5 million for prescription drugs and $72.0 million for co-morbidity. 6. In addition to this $141.4 million is spent on prevention and research.	come to the same conclusion using the same methodology to calculate costs. This lack of concordance diminishes the credibility of defining the cost of alcohol use.	
Spicer, R.S., Miller, T.R. &	2003	Case-control	4 063	2 756	69%	1. After matching by (controlling for) job type and adjusting for employee days, the injured	The authors have raised a number of limitations in the present study.	3

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Smith, G.S.		cohort study.				were more likely to be female, young, a minority (non-Hispanic black or Hispanic) and to be employed less than 5 years. Although an indicator of problem substance use was rare in both cases (2.5%) and controls (1.7%), these differences were significant. 2. After controlling for worker demographics and problem behaviours, the odds ratio for problem substance use declined from 1.61 (p < .001) in the univariate model to 1.21 (p =.138) in the final model. The odds ratios for absenteeism and dishonest/unprofessional behaviour also declined. 3. There was evidence of collinearity between age and length of employment; both were included in the models to control for any confounding role in the relationship between substance use, workplace problems and occupational injury. There was otherwise no evidence of collinearity among the independent variables. 4. Worker demographics, in particular length of employment, were strong confounders in the relationship between problem substance use and occupational injury.	1. The low prevalence of exposure (problem substance use) among both cases and controls limited the ability to capture the dynamics of substance use in the complex relationship between behaviour, personality, substance use, and occupational injury. 2. The validity of using corporate discipline records to measure deviant behaviour is not known, nor have these discipline measures been compared to an assessment instrument whose validity has been tested. 3. It is possible that workplace problems are due to impairment resulting from substance use. Absenteeism resulting from off-the-job substance use is a reasonable possibility. 4. By relying exclusively on corporate records, the study may have failed to identify many problem workers, although	

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							those who were identified were probably correctly classified. 5. The final limitation of this study is the generalisability of the findings. The labour force was heavily unionised and a large percentage (about 25%) worked in safety-sensitive jobs. In addition, the company has had a well-established substance abuse prevention and early intervention program in place since 1989.	
Stallones, L. & Xiang, H.	2003	Prospective cohort study	1 406	872 Year 2 746 Year 3 653	62% 85.6 % 74.8 %	1. Farm residents who consumed three or more drinks (e.g., cans, or bottles of beer, glasses of wine, cocktails, or shots of liquor) had an injury rate of 3.62 per 10.000 person-days (95% CI=2.38-4.85), which was higher than the injury rate among those who did not drink any alcohol and slightly higher then those who drank one to two drinks on a typical occasion. 2. Farm residents who drank more often (more days of alcohol drinking per week) and who drank more alcohol on a typical drinking occasion (average drinks per occasion)	1. A major limitation of the present study is that the alcohol consumption pattern assessed was normal, or average, self-reported drinking. 2. Alcohol and injury data were collected through self-reported questionnaires and not externally validated.	3

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						generally had the highest injury incidence rates. The heaviest drinking group (combined frequency and amount) has a slightly lower rate of injury compared to the next highest category of drinkers. 3. By controlling for confounding effects of age, gender, primary occupation, off-farm paid employment, and history of work on someone else's farm, alcohol consumption frequency (average days of alcohol drinking per week) was highly predictive of injury among farm residents; however there was little difference in the relative risk for those who drank 1 to 2 days per week compared to those who drank >3days per week. The quantity of alcohol consumed was highly predictive of experiencing an injury, although the moderate consumption (one to two) drinks yielded a higher relative risk of injury compared with the highest consumption category (three or more).		
Steffy, B.D. & Laker, D.R.	1991	Cross-sectional survey.	10 000	8 640	86%	1. Results suggest that heavier drinkers were male and older. 2. Use of alcohol to relax was greater among younger employees, men and minorities.	The authors have raised a couple of shortcomings in the present study. 1. Weak relationships may be due to the relatively weak reliability	2

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						3. Socially desirable responding was associated with less reported alcohol use. Alcohol intake was greater among those with a greater body-mass. 4. Regression analysis suggests that, while employment insecurity and recent stressful life events predicted both dependent outcomes, role stresses were not predictive; except for the finding that role overload was associated with using alcohol to relax.	and predictive validity of the measures employed. The reliability of the measures used in this study could have been stronger. 2. Self-reports of drinking were probably underreported, as indicated by the distortion scale. As a result, variance in the dependent measures was restricted. 3. The cross-sectional design makes it impossible to determine causality. 4. Drinking behaviour was viewed as a consequence of personal and workplace stressors. It is possible that drinking behaviour may predict workplace outcomes, as well as lead to employment problems and life strains.	
Stoltzfus, J.A. & Benson, P.L.	1994	Pretest-posttest case-	659	634	96%	1. A five percent change (or more) in the desired direction was used, based on consultation with 3M officials, as representing meaningful	1. Being an evaluation of one program conducted in a manufacturing plant in a small	3

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		control study.				change. 2. All of the changes which meet this 5% criteria are found only in the experimental site. These include reduction in four measures of alcohol use (including both frequency of use and volume measures) and reduction in both drinking and driving and riding with a driver who is under the influence. Furthermore, the experimental group decreased from 16% to 9% of employees who reported one or more of the four criteria on the index of negative work consequences due to alcohol and/or drug use. 3. The percent of employees who reported binge drinking (5 or more drinks in a row, 1 or more times in the last 2 weeks) decreased as follows: T_1 = 28%, T_2 = 23%, T_3 = 14%. The percent who reported that they are alcohol abstainers followed this pattern: T_1 = 38%, T_2 = 42%, T_3 = 53%. And the percent who are categorised as heavy drinkers (60 or more drinks in the last month and/or binge drinkers) fell from 29% at T_1 to 24% at T_2 to 15% at T_3.	Midwestern U.S. community with its unique context could affect both the outcome of the program as well as the representativeness of the study results. 2. Relying on self-reported drinking data is a source of information known for its potential bias (i.e., people have tendency to underreport their alcohol use). 3. No discussion about confounders that could have affected the outcomes of the program (e.g., external or internal factors).	
Tomiak, M. Gentleman, J.F. &	1997	Cross – sectional survey.	?	1 148	?	1. The results of this study show that there are health differences, sometimes subtle ones, even within the upper end of the	1. The study relies on self-reported data on drinking habits a source of information that has been	4

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Jette, M.						socioeconomic status (SES) spectrum. The data portray public senior managers as tending to engage in healthy lifestyles and enjoying a number of health advantages, i.e., not smoking, having normal BMI and normal blood pressure, taking part in regular physical activity, reporting of good health status, seeing a doctor less often, and having fewer days incapacitated, in comparison with middle managers. 2. Male and female senior managers tend to drink more, take more medication, and more have very stressful jobs in comparison with middle managers. In addition, female senior managers are more likely to have higher cholesterol levels and have Type A personalities than female middle managers, and both of these characteristics are risk factors for future cardiovascular problems. 3. Compared to male managers, fewer female managers smoke or drink and fewer have high body mass index, high blood pressure or high cholesterol levels. Women are also more likely to report being in good health. 4. Although there do not appear to be many negative effects in the short-term, it is difficult	found to be a cause of underreporting of alcohol use. 2. No analysis of potential confounding variables 3. Unclear sample size raises questions about the representativeness of the present study. 4. Descriptive data leaves little information regarding correlation and cause to why senior managers have poorer health than other managers.	

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						to assess what the long-term effects of ongoing managerial stress might be, without longitudinal follow-up.		
Towers, A.M., Kishchuck, N., Sylvestre, M., et al.	1994	Case-control survey.	?	199 testgrp 123 control	?	1. Alcohol is a sensitive subject when discussed in worksite group settings. 2. Data suggest that there are alcohol problems in the workplace of which co-workers are clearly cognizant. 3. In one setting the intervention led to the development of organisational rules regarding workers who reported to work inebriated, where this behaviour had been previously tolerated. 4. The sessions were better received when disease concepts were avoided. 5. Evaluation research on alcohol requires particular care with confidentiality and ongoing communication with all stakeholders, especially unions. 6. The main conclusion is that worksite health promotion regarding alcohol is feasible. The complex process of negotiating, implementing, and evaluating a worksite alcohol health promotion program is	1. Relative small population. 2. Lack of information regarding response rate.	3

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						discussed.		
Trice, H.M. & Sonnenstuhl, W.J.	1990	Review	N/A	N/A	N/A	1. Work organisations are very prominent cultural entities and, as such, embrace their own drinking norms, rationales and social controls. 2. Although there is a growing research literature on workplace risks associated with alcohol abuse and dependence, the studies as a whole suffers from numerous research problems. Generally, they are poorly conceptualised and operationalised, contain numerous sampling problems and rely principally upon bivariate statistical analyses. 3. According to the *cultural perspective*, administrative and occupational subcultures develop norms about what constitutes appropriate drinking. Administrative support for heavy drinking may permeate an entire organisation or be confined to a specific department or group. Similarly, heavy drinking may be encouraged at business lunches, conferences, office parties and managerial retreats or among specific groups of workers who believe that it promotes health and prevents industrial disease or is in some other		

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						way functional. 4. Research suggests that those workers who are heavily involved in work-based social support networks drink more heavily and have more drinking problems than those without such social support, even when the work is intrinsically rewarding. 5. Overall, drinking continues to be an integral part of work life and consequently administrators and occupational members feel ambivalent about adopting and implementing policies to control drinking behaviour. 6. The *social control perspective* predicts that those characteristics that weaken workers' integration into, or regulation by, the work organisation are likely to put them at risk of developing alcohol problems. It has been argued that there are two general types of workplace risks that lessen social control: (1) the absence of supervision and (2) low visibility of job performance. 7. According to the *alienation perspective*, work roles that lack creativity, variety and independent judgement create in workers a sense of dissatisfaction and powerlessness that they learn to relieve through drinking. Job		

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						complexity indexes have been used by researchers to operationalise the amount of creativity, variety and judgement in work roles; however, these studies have produced mixed results. 8. The *work stress perspective* focuses upon workplace experiences and events that become translated into life strains; however, unlike the alienation model, the stress perspective does not assume that work roles are central in people's lives and that work in modern society is intrinsically dissatisfying. 9. Research has been able to demonstrate that stress at work and drinking are related because workers who feels stressed learn that drinking is an appropriate method for unwinding. Both alienation and stress is in other words learned rationales for drinking.		
Tsukamoto, K., Hayashi, T., Suzuki, T. et al.	1997	Cross-sectional survey.	?	845	?	1. The most common reason for drinking was 'social drinking in business situations', with 438 respondents (51.8%) giving this reason. 2. The affirmative responses to the question about alcohol-related injury, time of work and decrease in productivity were 1, 11, and 31 respectively.	1. Unclear sample size and response rate. 2. The use of a cross-sectional study design makes it impossible to draw any conclusions regarding causality.	4

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						3. 'Social drinking in business situations' had a significantly negative standardised regression coefficient (beta) for interpersonal relationships with superiors and colleagues, indicating that the respondents who chose this reason had better interpersonal relationships. The other work-setting factors did not show any significant correlation coefficient with this reason. 'Drinking to reduce frustration' had a significantly positive beta coefficient for all four factors (quality of work, superiors relationship, work quantity/environment, and colleagues relationships), indicating an unfavourable work-setting.	3. The sample consisted only of drinking men, non-drinkers and all women were excluded and this would limit the representativeness of the results. 4. Risk of data bias when using self-reported drinking data since this is a common source of underreporting in alcohol use. 5. No discussion about potential confounders that could affect the outcome of the study.	
Upmark, M., Möller, J. & Romelsjö, A.	1999	Longitudinal working population survey.	1 855 Baseline 1984	? Follow-up 1991	?	1. In both sexes, a consistent pattern of increased sickness absence was seen for high consumers and for those with indication of problem drinking. 2. In most, comparisons, a clearly increased relative risk, although not always statistically significant, for an average of at least 60 sick days per year of for a disability pension during follow up was found. In multivariate analysis, controlling for age, socioeconomic group, smoking habits, and self-reported health, a	1. The study relies on self-reported drinking habits a source of information identified as biased by underreporting alcohol use. 2. It is unclear how many individuals participated in the follow-up survey in 1991. 3. A source of bias identified by the authors is the potential source of systematic error is non-participation. It is possible that	4

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						small reduction in the relative risk was found, suggesting that these factors could explain only a small part of the relative risks. 3. The risk for abstainers were higher than for low and moderate consumers. 4. The conclusion is that the effect of alcohol on subsequent high levels of sickness absence five to seven years after baseline as well as on the occurrence of disability pensions suggested that there is an effect on working incapacity independent of baseline health status, smoking, and socioeconomic group.	individuals who use excessive levels of alcohol were absent due to sickness or on disability pension and therefore registered as non-participants.	
Vuori, J.	1994	Cross-sectional longitudinal survey.	1 059	817 (706)	77% (67%)	1. In the analyses of structural relationships, individual factors in youth were related to adult variables for both sexes, although only two consistent relationships were found for women: outgoing, social activities in youth predicted adult smoking and use of alcohol. 2. Of the job factors, low job demands were related to smoking and lack of support was related to sedentary behaviour in women. 3. The strong relationship of sense of coherence with perception of social support and influence at work for both sexes characterised	1. Not 100% clear sample selection, some people accounted for. 2. The use of self-reported data in the case of alcohol use has been found to produce underreported drinking figures. 3. The cross-sectional design limits the possibility to determine causality. The authors mention one additional shortcoming of the present study.	4

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						its role in health-promoting experiences at work, and supported its importance as a general health resource.	4. The systematic sample loss resulted in an over-representation of highly educated people and the selection of the variables in the original study. Due to the sample loss, less educated people, probably representing a lower socio-economic status, were under-represented.	
Webb, G.R., Redman, S., Hennrikus, D.J. et al.	1994	Review & Cross-sectional survey.	1 206	506	42%	1. The highest proportion of injuries occurred to those under 21 years (11%) and those aged 21 to 30 years (21%), with the lowest proportion occurring to those aged 41 to 50 years (6%). 2. Subjects employed for 6 to 10 years had the highest proportion of injuries (21%), followed by those under 21 years (13%), with the lowest proportion occurring to those with over 15 years of employment (7%). 3. Among problem drinkers, 26% had at least 1 day absence due to a work injury, compared with 5% for the presumptive problem drinkers and 10% for the non-problem drinkers. 4. The relationship between injury-related	1. There is no discussion regarding potential confounding variables that might affect study results. 2. A relatively low response rate leave questions regarding the representativeness of the study.	3

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						absence and high alcohol consumption was not significant. 5. Problem drinkers, compared with non-problem drinkers, were 2.7 times more likely to have an injury-related absence. Subjects with low levels of low job satisfaction were 2.2 times more likely to have an injury-related absence. 6. 47% of the heavy binge drinkers, 46% of the medium binge drinkers and 47% of the non-binge drinkers had two or more injuries. These differences were not significant. 7. Because problem drinking, but not high alcohol consumption or binge drinking, was found to be significantly related to the occurrence of work injuries and related absences, it was decided to investigate the relationship between problem drinking and high alcohol consumption. Chi-square analysis revealed a significant relationship between the two measures and 5% of the non-problem drinkers, 18% of the presumptive problem drinkers and 31% of the problem drinkers were classified as heavy drinkers.		
Wells, S. &	1999	Cross-	12 722	10 385	82%	1. A significant relationship was found between	1. One shortcoming of the present	2

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Macdonald S.		sectional survey.				average number of drinks and the variable reflecting at least one accident in the previous 12 months ($P < 0.0001$). Those who reported drinking 14 or more drinks per week were 1.6 times more likely than non-drinkers to have accidents. 2. Among the younger age groups (15-24 and 25-34 years of age) alcohol consumption pattern were significantly associated with work accidents. A results that was not significant for the older age groups.	study is that it measures drinking patterns rather than consumption prior to injuries. 2. The cross-sectional study design makes it impossible to determine causality.	
Wilson, M.G., DeJoy, D.M., Jorgensen, C.M. et al.	1999	Cross-sectional survey.	2 680	2 090	78%	1. Approximately 25% of worksites with 15 to 99 employees offered health promotion programs to their employees, compared with 44% of worksites with 100+ employees. 2. As with the larger worksites, the most common programs for worksites with 15 to 99 employees were those related to occupational safety and health, back injury prevention, and CPR 3. The majority of worksites in both size categories had alcohol, illegal drug, smoking and occupant protection policies. 4. The majority of both small and large worksites	1. Regarding accessibility to programs then the authors rely solely on workplace data without investigating whether employees know and feel that there are various programs available for them. 2. Descriptive data and lack of analysis regarding differences between large and small workplaces.	3

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						also offered group health insurance to their employees (92% and 98% respectively), with many of the worksites also extending benefits to family members and dependents (approximately 80% for both business sizes).		
Wynn, P.A.	2000	Review/Case-control study.	?	66	?	1. No significant change in mean consumption was found between the two Daily Diary periods, suggesting there were no change in drinking habits. 2. There was poorer agreement between the Daily Diary and the Time Line Follow-Back (TLFB) method. The TLFB gave a significant lower mean estimate of consumption, suggesting lower underestimates true consumption or Daily Diary overestimates true consumption. 3. Although neither method could be validated against actual consumption, it is likely that the TLFB method underestimated consumption rather than the Daily Diary overestimated. This would be consistent with epidemiological surveys that have found retrospective assessments of consumption in large representative populations underestimate official sales figures for alcohol by up to 70%.	1. Neither method was validated against actual consumption. 2. Very small sample size and unclear response rate decreases representativeness of the study. 3. No analysis of potential confounding variables.	4

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Yang, M.J., Yang, M.S. & Kawachi, I.	2001	Cross-sectional survey.	1 192	1 117	94%	1. Demographic results indicated that 93.3% were male, some 77% were married and approximately 77% were above the age of 30. 2. 61.8% reported imbibing one or more drinks during the preceding month; the average daily alcohol consumption being 0.2 ± 0.9 drinks. 3. 16.8% reported having experienced drinking-related problems in the preceding month. 4. Workers with low occupational status were more likely to become problem drinkers when they felt comparatively self-estranged in their work. 5. Those with a family history including any habitual drinker or those under more encouraging workplace drinking subculture were more likely to have drinking-related problems.	1. The large proportion of male participants might make it difficult to adopt these results to other work settings with a different gender structure. 2. The cross-sectional study design makes it impossible to drawn any clear cut conclusions regarding causality (e.g., between occupational status and problem drinkers).	2
Yen, I.H., Ragland, D.R., Greiner, B.A. et al.	1999	Cross-sectional survey.	1 542	883	57%	1. Operators who reported discrimination in at least one situation, out of possible four, were more likely to have had negative life consequences as a result of drinking (adj. OR=1.97; 95% CI, 1.20-3.83) and were more likely to be classified as having an alcohol disorder (OR=1.56 [0.96-2.54]), compared to	The authors have raised concerns regarding a few methodological limitations. 1. The cross-sectional study design make it impossible to establish a direction of effect between discrimination and alcohol	3

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						those who reported no instances of workplace discrimination. Results adjusted simultaneously for age, sex, race/ethnicity, education, income, marital status, and seniority. 2. There was no association between workplace discrimination and heavy drinking or drinks per month. 3. The conclusion is that cross-sectional data from a sample of urban transit operators indicates an association between workplace racial discrimination and some measures of alcohol consumption.	consumption. 2. Another issue related to the cross-sectional design is the different timeframes for exposure to discrimination and outcomes. 3. Another caution concerns the reporting of alcohol consumption. Self-reported alcohol use are a source known to result in underreporting. 4. With regards to the model, it is possible that unknown or unmeasured confounders, such as personality, that are not included in the model, would reduce the magnitude of the association between workplace discrimination and alcohol consumption. 5. The sample is a relatively small group of employees from one company.	
Zarkin, G.A., French, M.T.,	1998	Cross-sectional	12 125	N/A	N/A	1. Results suggest that men who use alcohol	1. Unclear response rate decreases	3

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Mroz, T. et al.		register survey.				have approximately 7% higher wages then men who do not drink, and this apparent wage premium is approximately the same of a wide range of alcohol consumption. 2. For women, the estimated alcohol use premium is approximately half as large as for men and is statistically insignificant. 3. Overall, there was no evidence that alcohol use is associated with lower wages even at high levels of use. 4. Based on the results of this study, in conjunction with the results of French and Zarkin (1995) and others, the conclusion is that there is strong evidence of a positive relationship between wages and alcohol use for men but substantially weaker for evidence of such relationship for women. 5. The final recommendation is that policymakers and employers should pay more attention to identifying negative consequences associated with alcohol abuse such as workplace performance problems and absenteeism) rather than focusing only on quantity and frequency measures of use.	the representativeness of the study findings. 2. The cross-sectional study design makes it impossible to determine direction of causality between alcohol use and earnings. The authors have raised a number of concerns in regards to their study results. 3. A possible concern with estimating the model of the present study on the combined 1991 and 1992 data is that the relationship between wages and alcohol use may not be stable across time. 4. Another concern is the potential endogeneity of alcohol use. If observed factors influence both the wage rate and the decision to drink alcohol, then alcohol use will be correlated with the error term in the used equation. 5. A final concern is that the results are driven by the definition of	

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							the seven used drinking categories. The used definition of light, moderate, and heavy drinkers are somewhat arbitrary definitions based on cut-offs that the authors thought were intuitive. It is possible that the results could have been different using alternative definitions for the alcohol use indicator variables.	
Zinkiewicz, L., Davey, P., Obst, P. et al.	2000	Cross-sectional survey.	14 616	4 979	34%	1. 13.5% of the total sample had witnessed an alcohol-related accident or near miss. 2. Absenteeism (86.6%) and health problems (81.5%) were the most frequently reported workplace problems caused by alcohol. Poor quality work (76.1%) and poor safety (74.5%) were reported next. 3. Those reporting drinking 5-7 days a week were the least likely to indicate alcohol-caused problems in all these categories, and the most likely to indicate that alcohol caused no problems ($x^2(3) = 26.94$, $p < 0.01$). Thirteen percent of 5-7 days a week drinkers, compared to 9% of each of the lower drinking	1. The cross-sectional study design makes it virtually impossible to determine causality between alcohol use and work-related problems. The authors also raise some concerns. 2. The fact that no drinking quantity or type measures could be included in the survey limit the conclusions that can be drawn about the relationship between drinking and support for organisational interventions.	3

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						categories, reported that alcohol causes no work-related problems. 4. Only 38.2% of respondents reported knowing the organisation's drug and alcohol policy. Approximately 65% of administration and management did not know or fully understand the policy. Those reporting that no policy existed were more likely to be drinking more than once a week (62%) than they were to be drinking less than once a week ($x^2(9) = 32.89$, $p < 0.001$). Of those reporting that no policy existed, 21.7% also reported handing a drinking problem, while of those who claimed to know the policy, 10.6% reported having a drinking problem ($x^2(6) = 48.0$, $p < 0.001$). 5. 97% of respondents felt that the railway should deal with alcohol in the workplace by providing information on its alcohol and drug policy. Those drinking 5-7 days a week showed the least support for any of the interventions, and the most support for doing nothing.	3. Even though the sample size was large the sample represented only around 30% of the organisation's employees. The possible non-response bias that can accompany low response rates is a potential concern in this study.	
Zwerling, C., Sprince, N.L., Wallace, R.B. et al.	1996	Cross-sectional survey.	9 825	7 089	72%	1. 4.9% of the non-farm sample cohort reported an occupational injury over the year preceding the interview. 2. Over 80% of the workers typically drank less	The authors raise a couple of limitations in the present study. 1. The cross-sectional study design makes it impossible to	2

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						than one drink per day and over 75% answered *no* to all the CAGE questions. 3. Men were ten times as likely as women to report drinking five or more drinks per day and four times as likely to answer *yes* to three r four CAGE questions. 4. Blue-collar workers were more likely than white-collar workers to reporting drinking five or more drinks per day and to respond positively to three or four CAGE questions. The same was true for those with strenuous jobs. 5. Smokers were more than three times as likely to drink five or more drinks per day and more than twice as likely to answer *yes* to three or four CAGE questions compared to non-smokers. 6. For the total cohort, the proportion injured is lowest for those who typically drink one to two drinks per day. The proportion injured is more than twice as high for the teetotallers and more than five times as high for those who reported typically drinking five or more drinks per day. 7. The injury rates were highest for those who typically drank five or more drinks a day with an odds ratio of 4.45, but they were elevated	determine to direction of causality. 2. The study design could potentially also increase the risk recall bias. 3. Data does not reveal number of hours worked in the previous year. It is possible that heavier drinkers worked less hours than their colleagues. If this would be the case then the analysis, that assumed that all workers worked a similar number of hours, would underestimate the risk of occupational injury per hour worked for the heavy drinkers.	

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						for the teetotallers as well.		

APPENDIX 2

KEY EXPERT PARTICIPANT INFORMATION SHEET

Participant information sheet

PhD-candidate Fredrik Welander

Centre for International Health – Curtin University of Technology

GPO Box U1987 Perth Western Australia 6845
Telephone +61 422 145 618 Fax +61 8 9266 2608
E-mail: f.welander@exchange.curtin.edu.au

Dear participant
I am a PhD-candidate conducting research on the prevention of alcohol related harm in the workplace. The purpose of the research is to identify what is considered quality practice. The process will involve interviews with key experts, a critical analysis of the literature and interviews with key stakeholders in work settings. I seek your contribution to the element focusing on expert opinion.

Your response will provide valuable information about what constitutes Good Practice. Participation in the survey is entirely voluntary. The information you provide is completely confidential, and no identification is required. You will be asked to provide information about your views of good practice and barriers to and facilitators of effective responses. The only personal information relates to age, gender, country of residence and occupational background. This information is requested so that comparison can be made between different age groups, men and women, countries and occupational backgrounds. The instructions for completing and returning the questionnaire are found in attachment 2 (the questionnaire).

This research is a component of my study towards PhD, conducted at the Centre for International Health, Curtin University of Technology, Western Australia. My supervisor and co-supervisor are Associate Professor Steve Allsop and Professor Karl W. Sandberg (National Institute for Working Life, Sweden). Please see the attached informed consent form for more details (Attachment 1).

Please contact me either on phone or e-mail if you have any questions about the survey.

Thank you for your time and co-operation
Yours sincerely

Fredrik Welander
Principal Investigator

APPENDIX 3

INFORMED CONSENT AGREEMENT

Informed Consent Agreement

Research Project: Prevention of Alcohol Related Harm in the Workplace

Principal Investigator: PhD-student Fredrik Welander

Centre for International Health, Curtin University of Technology

Phone: +61 422 145 618 E-mail: f.welander@exchange.curtin.edu.au

This research project on prevention of alcohol related harm in the workplace is conducted by PhD-student Fredrik Welander from the Centre for International Health at Curtin University of Technology, Western Australia in co-operation with National Institute for Working Life, Sweden.

The purpose of the research is to investigate good practice in responding to alcohol related harm in the workplace. Barriers to and facilitators of good practice in preventing alcohol related harm in the workplace will also be identified in order to identify strategies for the implementation of good practice in the workplace. Key experts (researchers and practitioners) on responding to alcohol and drug related harm in the workplace will be interviewed using an e-mail questionnaire. The interviews will include areas such as occupational health and safety, health promotion, management and prevention of alcohol related harm in the workplace, assessing their views on what constitutes good practice.

In order to ensure confidentiality, no person will be identified by name and individual data will be transformed into group data to avoid identification. Collected data will remain the property of the researcher and no other persons (other than the researcher and his two supervisors) will have access to the data. However, I ask for consent to include your name in a list of people interviewed. No specific comment or view will be associated with any individual. Should you decline to have your name included in the list of experts I would still be keen to interview you anonymously.

Please note that, should you have any concerns about the conduct of the research, you may contact Associate Professor Steve Allsop (Departmental Supervisor) Centre for International Health on +61 8 9370 0339.

I am willing to participate in this research project. I understand that I am free to withdraw my participation in the research at any time.

The purpose of the research has been explained to me and I have been given the opportunity to ask questions about the research. I understand that any information or personal details gathered during this research about me are confidential and that neither my name nor any other identifying information will be used or published without my written permission.

I understand that if I have any complaints or concerns about this research I can contact Associate Professor Steve Allsop (Departmental Supervisor, Centre for International Health) on +61 8 9370 0339.

Signed:_____ (I agree to be interviewed)
Signed:_____(Informant/Participant)
Signed:_____ (Investigator)
Signed:_____ (Departmental Supervisor)

Signed:_____(I agree/do not agree to my name being included in a list of key experts who where interviewed)
Signed:_____(Informant/Participant)
Signed:_____ (Investigator)
Signed:_____ (Departmental Supervisor)

APPENDIX 4

INFORMATION ON HOW TO COMPLETE QUESTIONNAIRE

Information about how to complete the questionnaire, please read

The following information is about the completion and returning of the following questionnaire.

- Fill in the questionnaire using your computer. The text fields will expand when you write in them.
- It may seem that there is some overlap between some questions; this is to tease out particular factors that have to do with the community and the workplace.
- It should take you about 30 – 45 minutes to complete the questionnaire.
- When you have completed the questionnaire save it onto your computer as a Word-document.
- Return the questionnaire by attaching it to an e-mail addressed to: f.welander@exchange.curtin.edu.au

If you have any questions about the completion of the questionnaire or having trouble opening it or returning it please contact me by phone or e-mail.

APPENDIX 5

EXPERT'S QUESTIONNAIRE

1. **How old are you?** **Years**

2. **What country do you currently live/work in?**

3. **What is your main educational background?**
   - ☐ **Psychology**
   - ☐ **Sociology**
   - ☐ **Medicine**
   - ☐ **Social work**
   - ☐ **Health promotion**
   - ☐ **Anthropology**
   - ☐ **Economics**
   - ☐ **Occupational health and safety**
   - ☐ **Other, please identify**

4. **What is your highest academic award?**
   - ☐ **Bachelor degree**
   - ☐ **Honours degree**
   - ☐ **Postgraduate diploma**
   - ☐ **Masters degree**
   - ☐ **PhD**
   - ☐ **Other, please identify**

5. **If you have published any articles: How many articles have you published, as main or co-author, in a peer reviewed journal on prevention of alcohol related harm in the broad community?** **articles**

6. **If you have published any articles: How many articles have you published, as main or co-author, in a peer-reviewed journal on prevention of alcohol related harm in the workplace in particular?** **articles**

7. **How many years have you been involved in the prevention of alcohol related harm?** **Years**

8. **How many years have you been involved in prevention activities directly targeting the workplace?**

   Years

9. **What is your current occupational title?**

10. **Please, briefly describe your role in prevention of alcohol related harm.**

11. **In your opinion, what are the key factors that ensure effective practice in preventing alcohol related harm <u>in the broad community?</u>**

12. **In your opinion, what are the key factors that ensure effective practice in preventing alcohol related harm <u>in the workplace?</u>**

13. **What prevents effective practice in preventing alcohol related harm <u>in the broad community?</u>**

14. **What prevents effective practice in preventing alcohol related harm <u>in the workplace?</u>**

15. **Who are the <u>key stakeholders</u> in preventing alcohol related harm in the workplace?**

16. **Is there a need to treat small, medium, and large size organisations differently when working with the prevention of alcohol related harm?**

    ☐ **Yes** ☐ **No – <u>continue to question 18</u>**

17. **If Yes, please describe in what way they should be treated differently.**

18. **What do you think will be the key factors, which will <u>encourage</u> a workplace to adopt strategies to prevent alcohol related harm?**

19. What do you think will be the key factors, which will <u>discourage</u> a workplace to adopt strategies to prevent alcohol related harm?

20. Are there any particular groups who should be specifically targeted in the prevention of alcohol related harm in the workplace? If so, who are they?

21. What are some to the key things <u>experience tells you not to do</u> to prevent alcohol related harm in the workplace?

22. What are some of the key things that <u>research tells us not to do</u> to prevent alcohol related harm in the workplace?

23. Please name up to five people with expertise or experience in the area of prevention of alcohol related harm in the workplace that could have valuable information to share, and therefore should receive this questionnaire. (Please write name, title, and e-mail address).

Thank you for taking your time to answer this questionnaire.

APPENDIX 6

REMINDER 1 - FOR EXPERT'S QUESTIONNAIRE

This is a reminder regarding the questionnaire for a study on prevention of alcohol related harm in the workplace that you should have received about a month.
I sincerely hope that you could take the time to complete the questionnaire and return it to me since it will be a very important part of my thesis. It would provide me with one piece of the puzzle of what constitutes good/quality practice in the work to prevent alcohol related harm in the workplace.

I wish to thank you for your support of this study by completing the questionnaire.

Sincerely yours

Fredrik Welander
PhD-candidate
Centre for International Health
Curtin University of Technology
Ph: +61 422 145 618
E-mail: f.welander@exchange.curtin.edu.au

APPENDIX 7

INTRODUCTORY LETTER TO ALNA RIKS FOR ASSISTANCE IN RECRUITING ORGANISATIONS (ENGLISH)

As you already know, PhD-candidate Fredrik Welander is conducting research on the prevention of alcohol related harm in the workplace. The purpose of the research is to identify what is considered as quality practice. The process will involve interviews with key experts, managers and employees, a critical analysis of the literature and interviews with key stakeholders in work settings.

Data gathering from key experts is underway, parallel with the literature analysis. The next process involves data gathering from managers and employees in companies and organisations and this is the reason we send you this letter.

We ask for your assistance to recruit companies/organisations to this phase of the research. All types of companies and organisations are of interest and the only prerequisite is that they are willing to participate.

The information will be gathered using an e-mail questionnaire, which can either be completed directly on screen or printed out and faxed to Fredrik. To secure anonymity all gathered data is confidential and neither company/organisation names nor individual identities will be published. The questionnaire will, after data processing, be destroyed. No gathering of sensitive data will be performed; the only personal data that is asked for is age and gender. These data are necessary in order to separate date into groups in order to perform an appropriate data analysis. A summary copy of the findings of the study, without any identifying information, will be given to participants.

The questionnaire consists of a number of multi-choice questions and it is estimated that it will take approximately 10 minutes to complete the questionnaire.

If you are interested in assisting the candidate in this work then we will send you additional information that can be distributed to workplaces. Please, contact Fredrik either by e-mail: f.welander@exchange.curtin.edu.au or by telephone: +61 422 145 618.

If you have any companies/organisations that are willing to participate then we would need the following information:

- The name of the company/organisation – in order to be able to separate data.
- The number of employees – to determine the frequency of those that have completed the questionnaire.
- The name of a contact-person at the workplace – which will receive the questionnaire for further distribution within the organisation.

We sincerely hope that you can help us with this and we are looking forward hearing from you.

Sincerely yours

Fredrik Welander	Steve Allsop
Principal investigator	Supervisor

(SWEDISH)

Som du vet så håller Fredrik Welander för närvarande på med en doktorsavhandling som studerar prevention av alkohol relaterade skador på arbetesplatser. Syftet med avhandlingsarbetet är att identifiera vad som är att beteckna som är bra tillämpat prevention. Denna process består av följande steg; intervjuer med ledande forskare och praktiker på området, intervjuer med ledare och personal, en kritisk litteratur analys av tidigare forskning samt intervjuer med nyckelpersoner på arbetsmiljöområdet.

Datainsamlingen från ledande forskare och praktiker pågår för närvarande paralellt med litteratur studien. Det steg som ligger närmast i tiden är datainsamlingen från ledare och personal i företag och organisationer och det är därför som vi nu kontaktar er.

Vi skulle behöver er hjälp med att rekrytera företag/organisationer till denna del av studien. Alla typer av företag/organisationer är av intresse, det spelar ingen roll om det är privata företag eller offentlig verskamhet, storleken är inte heller av betydelse. Det viktiga är att så många som möjligt är villiga att delta.

Informationen kommer att samlas in via en e-post enkät, vilken kan besvaras direkt i datorn alternativt skrivas ut och faxas tillbaka till doktoranden. För att säkerställa anonymiteten så är alla insamlade data sekretessbelagda och deltagarnas identitet kommer att vara skyddat, inga uppgifter om företags/organisations namn eller personuppgifter kommer att publiseras. Enkäterna kommer efter databehandling att förstöras. Insamling av känsliga personuppgifter kommer inte att ske, de enda personrelaterade uppgifter som är av intresse för studien är ålder och om personen är man eller kvinna. Dessa uppgifter är nödvändiga för att kunna gruppera insamlade data och göra en relavant dataanalys. Enkäten kommer att bestå av ett antal frågor med fasta svarsalternativ, det tar ungefär 10 minuter att besvara enkäten.

Om ni är intresserade av att bistå doktoranden med detta så skickar vi över ytterligare material för vidare distribution till arbetsplatserna. Hör av dig till Fredrik så fort som möjligt. Han nås antingen via e-post:
f.welander@exchange.curtin.edu.au
eller på telefon +61 422 145 618.

Om det finns intressearde företag/organisationer så skulle vi behöva få in följande information:

- Företags/organisationsnamn samt ungefärligt antal anställda. Detta behövs för att hålla isär olika grupper samt för att få en uppfattning om hur många av de anställda som besvarat enkäten.
- Namnet på en kontaktperson på företaget/organisationen – som kan vidaredistribuera enkäten ut till resterande personal på arbetsplatsen.

Hoppas att du kan hjälpa oss med detta.

MVH

Fredrik Welander
Doktorand

Steve Allsop
Huvudhandledare

APPENDIX 8

INTRODUCTORY LETTER TO ORGANISATIONS (SWEDISH)

Hej .....

Tack för att du och din arbetsplats har valt att delta i denna studie, den information som ni bidrar med är ovärderlig i mitt avhandlingsarbete.

Denna enkät utgör en del av mitt avhandlingsarbete, ett arbete vars huvudtema är prevention av alkohol relaterade skador på arbetsplatser och då speciellt på arbetsplatser utanför den traditionella industrisektorn. Anledningen till att jag valt att studera denna typ av arbetsplatser har huvudsakligen att göra med att väldigt lite forskning har gjorts utifrån detta perspektiv. Tidigare forskning har mestadels studerat tillverkningsindustri och yrken där de fysiska riskerna har varit de dominerande. Jag är intresserad av hur man arbetar med prevention och policyfrågor på arbetsplatser där riskbilden är av en annan karaktär, där psyckosociala faktorer spelar en mer dominerande roll. Arbetsplatser där arbetet innebär interpersonella kontakter, exempelvis med kunder eller som support för tillverkande delar av verksamheten. Exempel på sådana arbetsplatser är: kontor, hotell & restaurang verksamhet, media, utbildnings verksamhet, butik, med flera.

Syftet med forskningen är att utveckla en modell för hur man med högsta möjliga kvalitet, baserad på vetenskaplig grund, ska kunna arbeta med preventions frågor i arbetslivet. I detta ligger också att resultaten av forskningen ska vara så utformade att de är direkt tillämpbara för olika typer av organisationer inom en mängd olika brancher.

Bifogat till detta mail finns 6 bilagor (1 enkät för dig som är huvudansvarig för alkohol policyn samt 5 enkäter till anställda på din arbetsplats). Enkäten fylls i direkt i datorn, mer information kring detta finns på framsidan av enkäten, och skickas till mig via e-post. Utöver själva ifyllandet av enkäten undrar jag om det vore möjligt att få ett exemplar av eran alkohol policy, om detta är möjligt så kan den skickas till följande adress:

Fredrik Welander
c/o Nerellie Richards
Centre for International Health
Curtin University of Technology
PO Box U1987
6145 Perth
Western Australia

Har du eller någon av de andra som fyller i enkäten några frågor, om enkäten eller mitt avhandlingsarbete, så är ni välkommen att höra av er till mig. Då jag är stationerad i Australien nås jag enklast via e-post, min adress är:
f.welander@exchange.curtin.edu.au

Vänliga hälsningar

Fredrik Welander
Doktorand
Centre for International Health
Curtin University of Technology
Perth, Western Australia.

APPENDIX 9

INFORMATION SHEET FOR MANAGERS AND EMPLOYEES (SWEDISH)

Till dig som fått denna enkät i din e-post.

Denna studie utgör en viktig del i mitt arbete mot en doktorsavhandling och jag hoppas att du kan bidra till studien genom att fylla i enkäten nedan. Syftet med enkäten är att samla in information kring utformning och innehåll av olika organisationers alkoholpolicy samt hur man inom din organisation arbetar med dessa frågor. Enkäten innehåller också frågor kring utbildning om alkohol relaterade skador samt olika hälsofrämjande insatser. I frågeformuläret ställs inga frågor om din livsstil eller hälsostatus, den enda information av personlig karaktär som jag behöver är huruvida du är en man eller kvinna samt hur gammal du är. Dessa två komponenter är viktiga då de gör det möjligt att särskilja män och kvinnor samt personer av olika ålder.

Försök att besvara alla frågor, om du är tveksam fyll i det alternativ som ligger närmast ditt tänkta svar alternativt vet ej. Det är viktigt för studien att informationen som samlas in är komplett. Du besvarar enkäten direkt på din dator genom att peka och klicka på de olika svarsalternativen, när du kommer till ett grått svarsfält så skriver du bara i det, det expanderar ju mer du skriver. Det är mycket viktigt att du fyller i endast ett alternativ på varje fråga. När du har fyllt i enkäten så sparar du dokumentet och skickar den som bilaga i ett e-mail till följande adress: f.welander@exchange.curtin.edu.au

Dina svar kommer därefter att föras in i ett databearbetningsprogram för analysering och sammanställning, när det är gjort så kommer din enkät att förstöras. Ditt svar kommer att behandlas konfidentiellt. Längst upp på enkäten (och på framsidan av detta brev) hittar du ett id-nummer, detta nummer finns där för att säkerställa att enkäterna från din arbetsplats inte blandas samman med andra enkäter. Alla personer som besvara enkäten på din arbetplats har samma id-nummer, det är med andra ord inga individuella id-nummer.

Genom att fylla i enkäten så ger du också ditt medgivande att delta i denna studie. Denna studie har granskats och godkänts av Curtin University's etiska granskningsnämnd.

Alla organisationer som deltar i denna studie kommer att få en sammanfattning av den färdiga avhandlingen.

Jag hoppas att du kan delta i denna studie då det är ett mycket viktigt bidrag till mitt avhandingsarbete. Har du några som helst frågor kring enkäten eller avhandlingsarbetet i sin helhet så är du välkommen att kontakta mig via e-post: f.welander@exchange.curtin.edu.au
alternativt via telefon +61 422 145 618.

Vänliga hälsningar

Fredrik Welander
Doktorand
Centre for International Health
Curtin University of Technology
Perth, Western Australia

APPENDIX 10

MANAGERS' QUESTIONNAIRE (ENGLISH)

1. **I am a** ☐ **Man** ☐ **Woman**

2. **I am years old**

3. **How long have you been working in this organisation?**
   Years
   Months

4. **How long have you been working in your current position?**
   Years
   Months

5. **How many does your organisation employ?**
   Employees

6. **Please describe the main function of your organisation (e.g., bank, insurance, government, hotel, restaurant, tourism, news & media, etc.)**

7. **Please describe the gender structure in your organisation?**
   % Men & % Women

8. **What is the single most important reason for having an alcohol policy in your organisation?**

9. **How long has the current policy been in place?**
   Years
   Months

10. **To what extent were you involved in the development of the current alcohol policy?**

☐	☐	☐	☐	☐
To a significant extent	To some extent	To less extent	Not at all	Don't know

11. **To what extent was the employee group involved in the development of the current alcohol policy?**

☐	☐	☐	☐	☐
To a significant extent	To some extent	To less extent	Not at all	Don't know

12. **To what extent were the managers involved in the development of the current alcohol policy?**

☐ To a significant extent ☐ To some extent ☐ To less extent ☐ Not at all ☐ Don't know

13. **The policy is aimed at everyone working in this organisation.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

14. **If you disagree or totally disagree with the statement above which groups are targeted?**

15. **The alcohol policy is integrated into the everyday life of this workplace.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

16. **The alcohol policy is designed to the specific characteristics of this workplace.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

17. **Our current alcohol policy is well adapted to the way we organise our work in this organisation.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

18. **The alcohol policy is a part of the organisations overall occupational health and safety program.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

19. **Our alcohol policy is one step to promote a healthy lifestyle in our workplace.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

20. **The alcohol policy informs you that every new employee shall receive information about its content.**

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

21. The alcohol policy informs you that the organisation can enforce disciplinary action if anyone breaches the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

22. The policy informs you that the organisation provides support for anyone experiencing alcohol related problems.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

23. The alcohol policy informs you what to do if you suspect that a colleague are experiencing alcohol related problems.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

24. The current alcohol policy includes random testing for alcohol.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

25. The alcohol policy informs you when alcohol testing is appropriate.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

26. The current alcohol policy includes testing for alcohol when someone is under suspicion of being intoxicated.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

27. The current alcohol policy informs you about rules and regulations regarding alcohol testing.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

28. All employees have before and during the implementation been informed about the purpose with the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

29. All employees have received information about the content of the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

30. There is strong employee support for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

31. There is strong support from senior management for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

32. There is strong union support for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

33. All employees have a responsibility to enforce the organisations alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

34. Having an alcohol policy is a way of supporting individual freedom.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

35. How much education have you received regarding alcohol related harm in the workplace?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

36. How much education have you received regarding what effects alcohol can have on your work performance?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

37. How much education have you received on lifestyle related issues (e.g., regular exercise, healthy eating and drinking, stress management, etc.)?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

38. In your estimate, how much time was spent on education about alcohol related harm in the workplace?

Hours

39. How good was your knowledge about alcohol related harm prior to the education?

☐	☐	☐	☐	☐
Very good	Good	Average	Poor	Very poor

40. To what extent has the education increased your knowledge about alcohol related harm in the workplace?

☐	☐	☐	☐	☐
Very much	Much	Little	Very little	Unchanged

41. How much training have you received on how to act if you suspect that a colleague may be experiencing alcohol related problems?

☐ Very extensive ☐ Extensive ☐ Little ☐ Very little ☐ None

42. How much training have you received on how to live a healthy lifestyle (e.g., regular exercise, how to eat and drink healthy, stress management etc.)?

☐ Very extensive ☐ Extensive ☐ Little ☐ Very little ☐ None

43. In your estimate, how much time was spent on training in how to develop a healthy lifestyle?

Hours

44. How good was your knowledge about alcohol related harm and how it might affect your health prior to the training?

☐ Very good ☐ Good ☐ Average ☐ Poor ☐ Very poor

45. To what extent has the training on living a healthy lifestyle increased your knowledge about alcohol related harm?

☐ Very much ☐ Much ☐ Little ☐ Very little ☐ Unchanged

46. The information given during education and training was well balanced and provided me with information about the potential positive as well as negative aspects of alcohol consumption.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

47. The outcome of the policy been successful.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

48. The policy is on a regular basis discussed in the workplace.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

49. How often is the policy evaluated?

☐ Once a month ☐ Every six months ☐ Every year ☐ Every 2nd year ☐ Never

50. The employee group is, as a part of the evaluation, regularly consulted about the alcohol policy.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

51. **What has, in your experience, been the biggest obstacle when trying to implement the alcohol policy?**

52. **What has, from your experience, been the biggest facilitator when trying to implement the current alcohol policy?**

Thank you for your participation

APPENDIX 11

MANAGERS' QUESTIONNAIRE (SWEDISH)

1. **Jag är** ☐ **Man** ☐ **Kvinna**

2. **Jag är** **år**

3. **Hur länge har du arbetat i den här organisationen?**
   År och **Månader**

4. **Hur länge har du arbetat i din nuvarande position?**
   År och **Månader**

5. **Hur många anställda har din arbetsplats?**
   Anställda

6. **Beskriv kortfattat inom vilken bransch din organisation huvudsakligen bedriver sin verksamhet (t.ex., bank, försäkringsbolag, myndighet, hotell, restaurant, media, etc.)**

7. **Hur stor andel av alla anställda är män respektive kvinnor på din arbetsplats?**
   % Män och **% Kvinnor**

8. **Vilken är den enskilt viktigaste anledningen till att din organisation har annammat en alkohol policy?**

9. **Hur länge har den nuvarande alkohol policyn funnits?**
   År och **Månader**

10. **I hur stor utsträckning var du involverad i utvecklandet av er nuvarande alkohol policy?**

☐	☐	☐	☐	☐	☐
I mycket stor utsträckning	**I stor utsträckning**	**Delvis**	**Lite grann**	**Inte alls**	**Vet ej**

11. **I hur stor utsträckning var personal gruppen involverad i utvecklandet av er nuvarande alkohol policy?**

☐	☐	☐	☐	☐	☐
I stor utsträckning	**I viss utsträckning**	**Delvis**	**Lite grann**	**Inte alls**	**Vet ej**

12. **I hur stor utsträckning var ledningsgruppen involverad i utvecklandet av er nuvarande alkohol policy?**

☐	☐	☐	☐	☐	☐
I stor utsträckning	**I viss utsträckning**	**Delvis**	**Lite grann**	**Inte alls**	**Vet ej**

Rangordna följande påståenden utifrån hur mycket du håller med resp. inte håller med om dom.

13. Vår nuvarande policy riktar sig till alla inom organisationen

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

14. Om du delvis eller inte alls håller med i påståendet ovan vilka specifika målgrupper riktar sig policyn till?

15. Vår alkohol policy är en integrerade del i vår organisations dagliga verksamhet.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

16. Alkohol policyn är utformad utifrån våran organisations specifika förutsättningar.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

17. Alkohol policyn är anpassad till hur vi organiserar arbetsuppgifterna i vår organisation.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

18. Alkohol policyn är en del i vår organisations övergripande arbetsmiljöprogram.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

19. Vår alkohol policy är ett steg mot att utveckla hälsosamma levnadsvanor inom organisationen.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

20. Vår alkohol policy talar om att alla nyanställda skall informeras om policyn och vad den innebär.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

21. Alkohol policyn beskriver vilka disciplinära åtgärder organisationen kan vidta om någon person bryter mot policyn.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

22. Alkohol policyn beskriver vilket stöd organisationen kan erbjuda en person som har alkohol relaterade problem.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

23. Alkohol policyn informerar om hur du ska gå tillväga om du misstänker att en kollega kan ha någon form av alkohol relaterade problem.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

24. Alkohol policyn informerar om att slumpvis alkohol testning är en del av vår nuvarande policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

25. Alkohol policyn informerar om när det är lämpligt med alkohol testning.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

26. Alkohol policyn informerar om att alkohol testning vid misstanke att en person är påverkad är en del av vår nuvarande policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

27. Vår nuvarande alkohol policy informerar om vilka lagar och regler som gäller för alkohol testning.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

28. Alla anställda har före och under införandet av vår nuvarnde alkohol policy informerats om syftet med policyn.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

29. Alla anställda har fått information om innehållet i vår nuvarande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

30. Det finns ett starkt stöd från de anställda för vår nuvarande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

31. Det finns ett startk stöd från ledningsgruppen för vår nuvarande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

32. Det finns ett starkt fackligt stöd för vår nuvarande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

33. Alla inom organisationen har ett ansvar att se till att alkohol policyn efterlevs.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

34. En alkohol policy är ett viktigt steg i att främja den individuella friheten.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

35. Kan du kortfattat beskriva varför eller varför inte en policy är viktig i främjandet av den individuella friheten.

36. Hur mycket utbildning har du erhållit relaterat till alkohol relaterade skador på arbetsplatser?

☐	☐	☐	☐	☐	☐
Väldigt Omfattande	**Omfattande**	**Begränsad**	**Väldigt begränsad**	**Ingen alls**	**Vet ej**

37. Hur mycket utbilding har du fått om vilka effekter alkohol kan ha på arbetskapacitet?

☐ Väldigt Omfattande ☐ Omfattande ☐ Begränsad ☐ Väldigt begränsad ☐ Ingen alls ☐ Vet ej

38. Hur mycket utbildning har du fått om livsstil relaterade frågor (t.ex., vikten av regelbunden motion, att äta rätt, dryckesmönster, stress, etc.)?

☐ Väldigt Omfattande ☐ Omfattande ☐ Begränsad ☐ Väldigt begränsad ☐ Ingen alls ☐ Vet ej

39. Enligt din uppskattning, hur mycket utbildning har du fått (i timmar räknat)?

Timmar

40. Hur bra var din kunskap om alkohol relaterade skador innan utbildningen?

☐ Mycket goda ☐ Goda ☐ Hyfsade ☐ Mindre goda ☐ Inga kunskaper ☐ Vet ej Alls

41. I vilken grad har utbildningen ökat dina kunskaper om alkohol relaterade skador på arbetsplatser?

☐ I mycket hög grad ☐ I hög grad ☐ I mindre grad ☐ Till mycket liten grad ☐ Oförändrad ☐ Vet ej

42. I vilken grad har utbildningen ökat dina kunskaper kring hur man kan utveckla en hälsosam livsstil?

☐ I mycket hög grad ☐ I hög grad ☐ I mindre grad ☐ Till mycket liten grad ☐ Oförändrad ☐ Vet ej

43. Informationen som jag fick under utbildningstillfället/tillfällena var välbalanserad och informerade om både de potentiellt negativa och positiva aspekterna av att dricka alkohol.

☐ Håller med fullständigt ☐ Håller med ☐ Håller delvis med ☐ Håller inte med ☐ Håller definitivt inte med ☐ Vet ej

44. Våra nuvarande alkohol policy har visat sig vara framgångsrik.

☐ Håller med fullständigt ☐ Håller med ☐ Håller delvis med ☐ Håller inte med ☐ Håller definitivt inte med ☐ Vet ej

45. Den nuvarande alkohol policy diskuteras regelbundet på arbetsplatsen.

☐ Håller med fullständigt ☐ Håller med ☐ Håller delvis med ☐ Håller inte med ☐ Håller definitivt inte med ☐ Vet ej

46. Personalgruppen konsulteras, som ett led i utvärderingprocessen, regelbundet angående gällande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

47. Hur ofta utvärderas alkohol policyn?

☐	☐	☐	☐	☐	☐
En gång i månaden	**En gång i halvåret**	**En gång per år**	**Vart annat år**	**Aldrig**	**Vet ej**

48. Utifrån dina erfarenheter, vad har varit det största hindret under arbetet att införa en alkohol policy i din organisation?

49. Utifrån dina erfarenheter, vad har varit de främsta anledningarna till att införandet av alkohol policyn har varit framgångsrikt?

Tack för din medverkan

APPENDIX 12

EMPLOYEE QUESTIONNAIRE (ENGLISH)

1. I am a ☐ Man ☐ Woman

2. I am years old

3. How long have you been working in this organisation?
Years
Months

4. How long have you been working in your current position?
Years
Months

5. To what extent were you involved in the development of the current alcohol policy?

☐	☐	☐	☐	☐
To a significant extent	To some extent	To less extent	Not at all	Don't know

6. To what extent was the employee group involved in the development of the current alcohol policy?

☐	☐	☐	☐	☐
To a significant extent	To some extent	To less extent	Not at all	Don't know

7. The policy is aimed at everyone working in this organisation.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

8. If you disagree or totally disagree with the statement above which groups are targeted?

9. The alcohol policy is integrated into the everyday life of this workplace.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

10. The alcohol policy is designed to the particular characteristics of this workplace.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

11. Our current alcohol policy is well adapted to the way we organise our work in this organisation.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

12. The alcohol policy is a part of the organisations overall occupational health and safety program.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

13. Our alcohol policy is one step to promote a healthy lifestyle in our workplace.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

14. The alcohol policy informs you that every new employee shall receive information about its content.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

15. The alcohol policy informs you that the organisation can enforce disciplinary action if anyone breaches the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

16. The policy informs you that the organisation provides support for anyone experiencing alcohol related problems.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

17. The alcohol policy informs you what to do if you suspect that a colleague are experiencing alcohol related problems.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

18. The current alcohol policy includes random testing for alcohol.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

19. The alcohol policy informs you when alcohol testing is appropriate.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

20. The current alcohol policy includes testing for alcohol when someone is under suspicion of being intoxicated.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

21. The current alcohol policy informs you about rules and regulations regarding alcohol testing.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

22. All employees have before and during the implementation being informed about the purpose with the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

23. All employees have received information about the content of the policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

24. There is strong employee support for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

25. There is strong support from senior management for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

26. There is strong union support for the current alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

27. All employees have a responsibility to enforce the organisations alcohol policy.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

28. Having an alcohol policy is a way of supporting individual freedom.

☐	☐	☐	☐	☐	☐
Totally agree	Agree	Neither agree or disagree	Disagree	Totally Disagree	Don't know

29. How much education have you received regarding alcohol related harm in the workplace?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

30. How much education have you received regarding what effects alcohol can have on your work performance?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

31. How much education have you received on lifestyle related issues (e.g., regular exercise, healthy eating and drinking, stress management, etc.)?

☐	☐	☐	☐	☐
Very extensive	Extensive	Little	Very little	None

32. In your estimate, how much time was spent on education about alcohol related harm in the workplace?

Hours

33. How was your knowledge about alcohol related harm prior to the education?

☐	☐	☐	☐	☐
Very good	Good	Average	Poor	Very poor

34. To what extent has the education increased your knowledge about alcohol related harm in the workplace?

☐ Very much ☐ Much ☐ Little ☐ Very little ☐ Unchanged

35. How much training have you received on how to act if you suspect that a colleague may be experiencing alcohol related problems?

☐ Very extensive ☐ Extensive ☐ Little ☐ Very little ☐ None

36. How much training have you received on how to live a healthy lifestyle (e.g., regular exercise, how to eat and drink healthy, stress management etc.)?

☐ Very extensive ☐ Extensive ☐ Little ☐ Very little ☐ None

37. In your estimate, how much time was spent on training in how to develop a healthy lifestyle?

Hours

38. How was your knowledge about alcohol related harm and how it might affect your health prior to the training?

☐ Very good ☐ Good ☐ Average ☐ Poor ☐ Very poor

39. To what extent has the training on living a healthy lifestyle increased your knowledge about alcohol related harm?

☐ Very much ☐ Much ☐ Little ☐ Very little ☐ Unchanged

40. The information given during education and training was well balanced and provided me with information about the potential positive as well as negative aspects of alcohol consumption.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

41. We regularly talk about the alcohol policy in our workplace.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

42. The alcohol policy is evaluated on a regular basis.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

43. The employee group is, as a part of the evaluation, regularly consulted about the alcohol policy.

☐ Totally agree ☐ Agree ☐ Neither agree or disagree ☐ Disagree ☐ Totally Disagree ☐ Don't know

Thank you for your participation.

APPENDIX 13

EMPLOYEE QUESTIONNAIRE (SWEDISH)

1. **Jag är** ☐ **Man** ☐ **Kvinna**

2. **Jag är** **år**

3. **Hur länge har du arbetat i den här organisationen?**
   År och **Månader**

4. **Hur länge har du arbetat i din nuvarande position?**
   År och **Månader**

5. **I hur stor utsträckning var du involverad i utvecklandet av er nuvarande alkohol policy?**

☐	☐	☐	☐	☐	☐
I mycket stor utsträckning	**I stor utsträckning**	**Delvis**	**Lite grann**	**Inte alls**	**Vet ej**

6. **I hur stor utsträckning var personal gruppen involverad i utvecklandet av er nuvarande alkohol policy?**

☐	☐	☐	☐	☐	☐
I mycket stor utsträckning	**I stor utsträckning**	**Delvis**	**Lite grann**	**Inte alls**	**Vet ej**

7. **Vår nuvarande policy riktar sig till alla inom organisationen**

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

8. **Om du delvis, inte alls, eller definitift inte håller med i påståendet ovan vilka specifika målgrupper riktar sig policyn till?**

9. **Vår alkohol policy är en integrerade del i vår organisations dagliga verksamhet.**

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

10. **Alkohol policyn är utformad utifrån våran organisations specifika förutsättningar.**

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

11. Alkohol policyn är anpassad till hur vi organiserar arbetsuppgifterna i vår organisation.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

12. Alkohol policyn är en del i vår organisations övergripande arbetsmiljöprogram.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

13. Vår alkohol policy är ett steg mot att utveckla hälsosamma levnadsvanor inom organisationen.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

14. Vår alkohol policy talar om att alla nyanställda skall informeras om policyn och vad den innebär.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

15. Alkohol policyn beskriver vilka disciplinära åtgärder organisationen kan vidta om någon person bryter mot policyn.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

16. Alkohol policyn beskriver vilket stöd organisationen kan erbjuda en person som har alkohol relaterade problem.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

17. Alkohol policyn informerar om hur du ska gå tillväga om du misstänker att en kollega kan ha någon form av alkohol relaterade problem.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

18. Alkohol policyn informerar om att slumpvis alkohol testning är en del av vår nuvarande policy.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

19. Alkohol policyn informerar om när alkohol testning är på sin plats.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

20. Alkohol policyn informerar om att alkohol testning vid misstanke att en person är påverkad är en del av vår nuvarande policy.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

21. Vår nuvarande alkohol policy informerar om vilka lagar och regler som gäller för alkohol testning.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

22. Alla anställda har före och under införandet av vår nuvarnde alkohol policy informerats om syftet med policyn.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

23. Alla anställda har fått information om innehållet i vår nuvarande alkohol policy.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

24. Det finns ett starkt stöd från de anställda för vår nuvarande alkohol policy.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

25. Det finns ett startk stöd från ledningsgruppen för vår nuvarande alkohol policy.

☐ Håller med fullständigt	☐ Håller med	☐ Håller delvis med	☐ Håller inte med	☐ Håller definitivt inte med	☐ Vet ej

26. Det finns ett starkt fackligt stöd för vår nuvarande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

27. Alla inom organisationen har ett ansvar att se till att alkohol policyn efterlevs.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

28. En alkohol policy är ett viktigt steg i att främja den individuella friheten.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

29. Kan du kortfattat beskriva varför eller varför inte en policy är viktig i främjandet av den individuella friheten.

30. Hur mycket utbildning har du erhållit relaterat till alkohol relaterade skador på arbetsplatser?

☐	☐	☐	☐	☐	☐
Väldigt Omfattande	**Omfattande**	**Begränsad**	**Väldigt begränsad**	**Ingen alls**	**Vet ej**

31. Hur mycket utbilding har du fått om vilka effekter alkohol kan ha på arbetskapacitet?

☐	☐	☐	☐	☐	☐
Väldigt Omfattande	**Omfattande**	**Begränsad**	**Väldigt begränsad**	**Ingen alls**	**Vet ej**

32. Hur mycket utbildning har du fått om livsstil relaterade frågor (t.ex., vikten av regelbunden motion, att äta rätt, dryckesmönster, stress, etc.)?

☐	☐	☐	☐	☐	☐
Väldigt Omfattande	**Omfattande**	**Begränsad**	**Väldigt begränsad**	**Ingen alls**	**Vet ej**

33. Enligt din uppskattning, hur mycket utbildning har du fått (i timmar räknat)?

Timmar

34. Hur bra var din kunskap om alkohol relaterade skador innan utbildningen?

☐	☐	☐	☐	☐	☐
Mcket goda	**Goda**	**Hyfsade**	**Mindre goda**	**Inga kunskaper alls**	**Vet ej**

35. I vilken grad har utbildningen ökat dina kunskaper om alkohol relaterade skador på arbetsplatser?

☐	☐	☐	☐	☐	☐
I mycket hög grad	**I hög grad**	**I mindre grad**	**Till mycket liten grad**	**Oförändrad**	**Vet ej**

36. I vilken grad har utbildningen ökat dina kunskaper kring hur man kan utveckla en hälsosam livsstil?

☐	☐	☐	☐	☐	☐
I mycket hög grad	**I hög grad**	**I mindre grad**	**Till mycket liten grad**	**Oförändrad**	**Vet ej**

37. Informationen som jag fick under utbildningstillfället/tillfällena var välbalanserad och informerade om både de potentiellt negativa och positiva aspekterna av att dricka alkohol.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

38. Den nuvarande alkohol policy diskuteras regelbundet på arbetsplatsen.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

39. Personalgruppen konsulteras, som ett led i utvärderingprocessen, regelbundet angående gällande alkohol policy.

☐	☐	☐	☐	☐	☐
Håller med fullständigt	**Håller med**	**Håller delvis med**	**Håller inte med**	**Håller definitivt inte med**	**Vet ej**

Tack för din medverkan

APPENDIX 14
REMINDER FOR MANAGERS AND EMPLOYEES (ENGLISH)

Hello

A while ago you were contacted by a staff member of Alna regarding a survey on the alcohol policy of your workplace and how you implement it. You were sent a questionnaire through your e-mail which should have reached you during the past two weeks. I just wanted to see how everything goes and check that you actually received the survey, there have been some problems with the e-mail system.

I have attached additional questionnaires just in case you didn't receive them. I hope that you, as the main responsible for the alcohol policy, and five employees would like to complete the survey and as soon as possible e-mail them to me. I would like to point out that the questionnaires aimed at employees are not to be given to individuals who are working as machine operators, carpenters or other types of labour. The idea is that the questionnaire is to be completed by people in other positions in your workplace, as for example engineers, office personel, civil servants, etc.

You are more than welcome to contact me if you have any questions whatsoever regarding the questionnaire or the study. The best way of contacting me is via e-mail. For safety reasons I have two e-mail addresses through wich I can be reached: (1) fredrik.welander@arbetslivsinstitutet.se or (2) f.welander@exchange.curtin.edu.au.

Regards
Fredrik Welander
PhD-Candidate
The Institute for Working Life – Östersund/
Centre for International Health, Curtin University

(SWEDISH)

Hejsan

För en tid sedan blev du kontaktad av en person från Alna angående en studie kring hur man arbetar med policyfrågor på arbetsplatser, mer specifikt arbetsplatsens alkohol policy. Därefter gick det ut en enkät till dig, i din e-post, vilken bör ha anlänt för cirka två veckor sedan. Nu tänkte jag bara höra hur det går och kontrollera att du verkligen har fått enkäten, det har varit stora problem med e-posten och därför vill jag kontrollera att du verkligen har fått den.

Har du nu inte fått enkäten så har jag för säkerhets skull bifogat enkäterna, som du ser är det två olika enkäter. Jag hoppas att du som ansvarig för policyn och fem anställda på din arbetsplats kan besvara enkäten och så snart som möjligt skicka in den till mig.. Jag vill speciellt poängtera att enkäten till dom anställda inte går ut till personer som arbetar med tillverkning eller liknande (dvs. ej till maskinister, svarvare, snickare, osv.). Det är tänkt att enkäten ska gå ut till personer som har andra funktioner på din arbetsplats, såsom exempelvis ingengörer, kontorspersonal, tjänstemän, osv.

Har du några funderingar så är du välkommen att höra av dig till mig, jag nås enklast via e-post. För säkerhets skull har jag nu två olika e-post adresser som jag kan nås på: (1) fredrik.welander@arbetslivsinstitutet.se, eller (2) f.welander@exchange.curtin.edu.au.

Vänliga hälsningar
Fredrik Welander
Doktorand
Arbetslivsintitutet – Östersund/
Centre for International Health, Curtin University

APPENDIX 15

HUMAN ETHICS CLEARANCE